

SEQUENCE LISTING

<110> KIRST, Susan
SHARP, John
HOLTZMAN, Douglas
BARNES, Tom
FRASER, Christopher

<120> Novel Genes Encoding Proteins Having Diagnostic,
Preventive, Therapeutic, and Other Uses

<130> 210147.0025/11U1

<140> Not Yet Assigned

<141> 2000-06-16

<150> US 09/342,364

<151> 1999-06-29

<160> 100

<170> PatentIn Ver. 2.1

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 Asp Leu Asp Leu Ser His Asn Ala Leu Gln Arg Leu Arg Pro Gly Trp
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Cys Arg Leu Tyr His Leu Leu Gln Arg Trp His Gln Arg Gly Leu Ser
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Ala Pro Gly Ser Arg Asp Gly Ser Ile Ala Val Leu Ala Asp Gly Ser
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Val Ser Val His Phe Pro Arg Pro Glu Pro Glu Ala Phe Asn Thr Gly
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Tyr Leu Phe Ala Pro Pro Cys Arg Cys Cys Arg Arg Ala Cys Pro Leu
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Phe Gln Leu Arg Ala Leu His Leu Asp His Asn Glu Leu Asp Ala Leu
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His Leu Leu Gln Arg Trp His Gln Arg Gly Leu Ser Ala Val Arg Asp
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Phe Ala Arg Glu Tyr Val Cys Leu Ala Phe Lys Val Pro Ala Ser Arg
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Leu Gln Ala Val Gly Met Phe Leu Gly Glu Phe Ser Cys Leu Ala Ala
50 55 60

Phe Tyr Leu Leu Arg Cys Arg Ala Ala Gly Gln Ser Asp Ser Ser Val
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Asp Pro Gln Gln Pro Phe Asn Pro Leu Leu Phe Leu Pro Pro Ala Leu
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Cys Asp Met Thr Gly Thr Ser Leu Met Tyr Val Ala Leu Asn Met Thr
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Ser Ala Ser Ser Phe Gln Met Leu Arg Gly Ala Val Ile Ile Phe Thr
115 120 125

Gly Leu Phe Ser Val Ala Phe Leu Gly Arg Arg Leu Val Leu Ser Gln
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Trp Leu Gly Ile Leu Ala Thr Ile Ala Gly Leu Val Val Val Gly Leu
145 150 155 160

Ala Asp Leu Leu Ser Lys His Asp Ser Gln His Lys Leu Ser Glu Val
165 170 175

Ile Thr Gly Asp Leu Leu Ile Ile Met Ala Gln Ile Ile Val Ala Ile
180 185 190

Gln Met Val Leu Glu Glu Lys Phe Val Tyr Lys His Asn Val His Pro
195 200 205

Leu Arg Ala Val Gly Thr Glu Gly Leu Phe Gly Phe Val Ile Leu Ser
210 215 220

Leu Leu Leu Val Pro Met Tyr Tyr Ile Pro Ala Gly Ser Phe Ser Gly
225 230 235 240

Asn Pro Arg Gly Thr Leu Glu Asp Ala Leu Asp Ala Phe Cys Gln Val
245 250 255

Gly Gln Gln Pro Leu Ile Ala Val Ala Leu Leu Gly Asn Ile Ser Ser
260 265 270

Ile Ala Phe Phe Asn Phe Ala Gly Ile Ser Val Thr Lys Glu Leu Ser
275 280 285

Ala Thr Thr Arg Met Val Leu Asp Ser Leu Arg Thr Val Val Ile Trp
290 295 300

Ala Leu Ser Leu Ala Leu Gly Trp Glu Ala Phe His Ala Leu Gln Ile
305 310 315 320

Leu Gly Phe Leu Ile Leu Leu Ile Gly Thr Ala Leu Tyr Asn Gly Leu
325 330 335

His Arg Pro Leu Leu Gly Arg Leu Ser Arg Gly Arg Pro Leu Ala Glu
340 345 350

Glu Ser Glu Gln Glu Arg Leu Leu Gly Gly Thr Arg Thr Pro Ile Asn
355 360 365

Asp Ala Ser
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<211> 18

<212> PRT

<213> Homo sapiens

<400> 12

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Thr Gly

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<211> 353

<212> PRT

<213> Homo sapiens

<400> 13

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 35 40 45
 Leu Leu Arg Cys Arg Ala Ala Gly Gln Ser Asp Ser Ser Val Asp Pro
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 Gln Gln Pro Phe Asn Pro Leu Leu Phe Leu Pro Pro Ala Leu Cys Asp
 65 70 75 80
 Met Thr Gly Thr Ser Leu Met Tyr Val Ala Leu Asn Met Thr Ser Ala
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 Ser Ser Phe Gln Met Leu Arg Gly Ala Val Ile Ile Phe Thr Gly Leu
 100 105 110
 Phe Ser Val Ala Phe Leu Gly Arg Arg Leu Val Leu Ser Gln Trp Leu
 115 120 125
 Gly Ile Leu Ala Thr Ile Ala Gly Leu Val Val Val Gly Leu Ala Asp
 130 135 140
 Leu Leu Ser Lys His Asp Ser Gln His Lys Leu Ser Glu Val Ile Thr
 145 150 155 160
 Gly Asp Leu Leu Ile Ile Met Ala Gln Ile Ile Val Ala Ile Gln Met
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 Val Leu Glu Glu Lys Phe Val Tyr Lys His Asn Val His Pro Leu Arg
 180 185 190
 Ala Val Gly Thr Glu Gly Leu Phe Gly Phe Val Ile Leu Ser Leu Leu
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 Leu Val Pro Met Tyr Tyr Ile Pro Ala Gly Ser Phe Ser Gly Asn Pro
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 Arg Gly Thr Leu Glu Asp Ala Leu Asp Ala Phe Cys Gln Val Gly Gln
 225 230 235 240
 Gln Pro Leu Ile Ala Val Ala Leu Leu Gly Asn Ile Ser Ser Ile Ala
 245 250 255

Phe Phe Asn Phe Ala Gly Ile Ser Val Thr Lys Glu Leu Ser Ala Thr
260 265 270

Thr Arg Met Val Leu Asp Ser Leu Arg Thr Val Val Ile Trp Ala Leu
275 280 285

Ser Leu Ala Leu Gly Trp Glu Ala Phe His Ala Leu Gln Ile Leu Gly
290 295 300

Phe Leu Ile Leu Leu Ile Gly Thr Ala Leu Tyr Asn Gly Leu His Arg
305 310 315 320

Pro Leu Leu Gly Arg Leu Ser Arg Gly Arg Pro Leu Ala Glu Glu Ser
325 330 335

Glu Gln Glu Arg Leu Leu Gly Gly Thr Arg Thr Pro Ile Asn Asp Ala
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<211> 29

<212> PRT

<213> Homo sapiens

<400> 14

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<212> PRT

<213> Homo sapiens

<400> 15

Asn Met Thr Ser Ala Ser Ser Phe Gln
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<210> 16

<211> 14

<212> PRT

<213> Homo sapiens

<400> 16

Asp Leu Leu Ser Lys His Asp Ser Gln His Lys Leu Ser Glu
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<210> 17

<211> 27

<212> PRT

<213> Homo sapiens

<400> 17

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<212> PRT

<213> Homo sapiens

<400> 18

Glu Ala Phe His Ala Leu Gln
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<210> 19

<211> 21

<212> PRT

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Ala Phe Tyr Leu Leu
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Met Tyr Val Ala Leu
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<210> 21

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<212> PRT

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Phe Leu Gly

<210> 22

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<212> PRT

<213> Homo sapiens

<400> 22

Trp Leu Gly Ile Leu Ala Thr Ile Ala Gly Leu Val Val Val Gly Leu
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Ala

<210> 23

<211> 17

<212> PRT

<213> Homo sapiens

<400> 23

Val Ile Thr Gly Asp Leu Leu Ile Ile Met Ala Gln Ile Ile Val Ala
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Ile

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<211> 18
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<400> 24
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Tyr Ile

<210> 25
<211> 23
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Asn Phe Ala Gly Ile Ser Val
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Ala Leu Gly Trp
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Leu

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<400> 28
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Pro Phe Asn Pro
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Arg Arg Leu Val Leu Ser Gln
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Thr Lys Glu Leu Ser Ala Thr Thr Arg
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<210> 32
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 Asp Ala Ser
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<210> 33
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<211> 729

<212> DNA

<213> Homo sapiens

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<211> 243

<212> PRT

<213> Homo sapiens

<400> 35

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Leu Gly Ile Gly Ala Glu Val Trp Trp Asn Leu Val Pro Arg Lys Thr
20 25 30

Val Ser Ser Gly Glu Leu Ala Thr Val Val Arg Arg Phe Ser Gln Thr
35 40 45

Gly Ile Gln Asp Phe Leu Thr Leu Thr Leu Thr Glu Pro Thr Gly Leu
50 55 60

Leu Tyr Val Gly Ala Arg Glu Ala Leu Phe Ala Phe Ser Met Glu Ala
65 70 75 80

Leu Glu Leu Gln Gly Ala Ile Ser Trp Glu Ala Pro Val Glu Lys Lys
85 90 95

Thr Glu Cys Ile Gln Lys Gly Lys Asn Asn Gln Thr Glu Cys Phe Asn
100 105 110

Phe Ile Arg Phe Leu Gln Pro Tyr Asn Ala Ser His Leu Tyr Val Cys
115 120 125

Gly Thr Tyr Ala Phe Gln Pro Lys Cys Thr Tyr Val Val Ser Ala Ala
130 135 140

Leu Leu Pro Arg Cys Pro Gln Pro Pro Ala Leu Leu Thr Leu Leu Trp
145 150 155 160

Thr Arg Gly Cys Gly Pro Gln Ser Pro Ala Leu Lys His Leu Leu Ile
165 170 175

Thr Ser Leu Ser Val Leu Arg Thr Cys Ser Pro Ser Leu Trp Ser Met
180 185 190

Glu Ser Leu Lys Met Gly Arg Ala Ser Val Pro Met Thr Gln Leu Arg
195 200 205

Ala Met Leu Ala Phe Leu Trp Met Val Ser Cys Thr Arg Pro His Ser
210 215 220

Thr Thr Ser Trp Ala Arg Asn Pro Leu Ser Cys Val Thr Trp Gly Pro
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Thr Thr Pro

<210> 36

<211> 20

<212> PRT

<213> Homo sapiens

<400> 36

Met Ala Pro His Trp Ala Val Trp Leu Leu Ala Ala Arg Leu Trp Gly
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Leu Gly Ile Gly
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<210> 37

<211> 223

<212> PRT

<213> Homo sapiens

<400> 37

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1 5 10 15

Glu Leu Ala Thr Val Val Arg Arg Phe Ser Gln Thr Gly Ile Gln Asp
20 25 30

Phe Leu Thr Leu Thr Leu Thr Glu Pro Thr Gly Leu Leu Tyr Val Gly
35 40 45

Ala Arg Glu Ala Leu Phe Ala Phe Ser Met Glu Ala Leu Glu Leu Gln
50 55 60

Gly Ala Ile Ser Trp Glu Ala Pro Val Glu Lys Lys Thr Glu Cys Ile
65 70 75 80

Gln Lys Gly Lys Asn Asn Gln Thr Glu Cys Phe Asn Phe Ile Arg Phe
85 90 95

Leu Gln Pro Tyr Asn Ala Ser His Leu Tyr Val Cys Gly Thr Tyr Ala
100 105 110

Phe Gln Pro Lys Cys Thr Tyr Val Val Ser Ala Ala Leu Leu Pro Arg
115 120 125

Cys Pro Gln Pro Pro Ala Leu Leu Thr Leu Leu Trp Thr Arg Gly Cys

130

135

140

Gly Pro Gln Ser Pro Ala Leu Lys His Leu Leu Ile Thr Ser Leu Ser
 145 150 155 160

Val Leu Arg Thr Cys Ser Pro Ser Leu Trp Ser Met Glu Ser Leu Lys
 165 170 175

Met Gly Arg Ala Ser Val Pro Met Thr Gln Leu Arg Ala Met Leu Ala
 180 185 190

Phe Leu Trp Met Val Ser Cys Thr Arg Pro His Ser Thr Thr Ser Trp
 195 200 205

Ala Arg Asn Pro Leu Ser Cys Val Thr Trp Gly Pro Thr Thr Pro
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<210> 38

<211> 2498

<212> DNA

<213> Homo sapiens

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<211> 678

<212> DNA

<213> Homo sapiens

<400> 39

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<211> 226

<212> PRT

<213> Homo sapiens

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Glu Glu Val Phe Thr Ser Lys Glu Glu Ala Asn Phe Phe Ile His Arg
35 40 45

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Leu Glu Arg Glu Cys Asn Glu Glu Leu Cys Asn Tyr Glu Glu Ala Arg
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Glu Ile Phe Val Asp Glu Asp Lys Thr Ile Ala Phe Trp Gln Glu Tyr
85 90 95

Ser Ala Lys Gly Pro Thr Thr Lys Ser Asp Gly Asn Arg Glu Lys Ile
100 105 110

Asp Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu
115 120 125

Val Ile Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn
130 135 140

Arg Leu Gln His Pro Cys Ser Ser Ala Val Tyr Glu Arg Gly Arg His
145 150 155 160

Thr Pro Ser Ile Ile Phe Arg Arg Pro Glu Glu Ala Ala Leu Ser Pro
165 170 175

Leu Pro Pro Ser Val Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala
180 185 190

Val Ala Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Pro Tyr Pro
195 200 205

Gly His Thr Lys Gly Phe Arg Val Phe Lys Lys Ser Met Ser Leu Pro
210 215 220

Ser His
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<210> 41

<211> 17

<212> PRT

<213> Homo sapiens

<400> 41

Met Phe Thr Leu Leu Val Leu Leu Ser Gln Leu Pro Thr Val Thr Leu
1 5 10 15

Gly

<210> 42

<211> 209

<212> PRT

<213> Homo sapiens

<400> 42

Phe Pro His Cys Ala Arg Gly Pro Lys Ala Ser Lys His Ala Gly Glu
1 5 10 15

Glu Val Phe Thr Ser Lys Glu Glu Ala Asn Phe Phe Ile His Arg Arg
20 25 30

Leu Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu
35 40 45

Glu Arg Glu Cys Asn Glu Glu Leu Cys Asn Tyr Glu Glu Ala Arg Glu
50 55 60

Ile Phe Val Asp Glu Asp Lys Thr Ile Ala Phe Trp Gln Glu Tyr Ser
65 70 75 80

Ala Lys Gly Pro Thr Thr Lys Ser Asp Gly Asn Arg Glu Lys Ile Asp
85 90 95

Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val
100 105 110

Ile Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn Arg
115 120 125

Leu Gln His Pro Cys Ser Ser Ala Val Tyr Glu Arg Gly Arg His Thr
130 135 140

Pro Ser Ile Ile Phe Arg Arg Pro Glu Glu Ala Ala Leu Ser Pro Leu
145 150 155 160

Pro Pro Ser Val Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala Val
165 170 175

Ala Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Pro Tyr Pro Gly
180 185 190

His Thr Lys Gly Phe Arg Val Phe Lys Lys Ser Met Ser Leu Pro Ser
195 200 205

His

<210> 43

<211> 96

<212> PRT

<213> Homo sapiens

<400> 43

Phe Pro His Cys Ala Arg Gly Pro Lys Ala Ser Lys His Ala Gly Glu
1 5 10 15

Glu Val Phe Thr Ser Lys Glu Glu Ala Asn Phe Phe Ile His Arg Arg
20 25 30

Leu Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu
35 40 45

Glu Arg Glu Cys Asn Glu Glu Leu Cys Asn Tyr Glu Glu Ala Arg Glu
50 55 60

Ile Phe Val Asp Glu Asp Lys Thr Ile Ala Phe Trp Gln Glu Tyr Ser
65 70 75 80

Ala Lys Gly Pro Thr Thr Lys Ser Asp Gly Asn Arg Glu Lys Ile Asp
85 90 95

<210> 44

<211> 25

<212> PRT

<213> Homo sapiens

<400> 44

Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val
1 5 10 15

Ile Phe Gly Leu Leu Gly Tyr Tyr Leu

20

25

<210> 45
 <211> 88
 <212> PRT
 <213> Homo sapiens

<400> 45
 Cys Ile Thr Lys Cys Asn Arg Leu Gln His Pro Cys Ser Ser Ala Val
 1 5 10 15
 Tyr Glu Arg Gly Arg His Thr Pro Ser Ile Ile Phe Arg Arg Pro Glu
 20 25 30
 Glu Ala Ala Leu Ser Pro Leu Pro Pro Ser Val Glu Asp Ala Gly Leu
 35 40 45
 Pro Ser Tyr Glu Gln Ala Val Ala Leu Thr Arg Lys His Ser Val Ser
 50 55 60
 Pro Pro Pro Pro Tyr Pro Gly His Thr Lys Gly Phe Arg Val Phe Lys
 65 70 75 80
 Lys Ser Met Ser Leu Pro Ser His
 85

<210> 46
 <211> 2169
 <212> DNA
 <213> Homo sapiens

<400> 46
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 ccaagaacag ggatatgtgt ggattacagt tttctctgcc ttgcctacga ctgtttctgg 180
 ttgttacctg ttatctttta ttattactcc acaaagaaat acttgatgt tcgtctgttt 240
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 agaattttcc tgaaagtaca gtttttctgt atctgactgg gaataatata tcttatataa 360
 atgaaagtga attaacagga ctccattctc ttgttagcatt gtatttggat aattctaaca 420
 ttctgtatgt atatccaaaa gcctttgttc aattgaggca tctatatttt ctatttctaa 480
 ataataattt catcaaagc ttagatcctg gaatatttaa gggactttta aatcttcgta 540
 atttatattt acagtataat caggtatctt ttgttccgag aggagtattt aatgatctag 600
 tttcagttca gtacttaaat ctacaaagga atcgctcac tgccttggg agtggtacct 660
 ttgttggtat ggttgctctt cggatacttg atttatcaaa caataacatt ttgaggatat 720
 cagaatcagg ctttcaacat cttgaaaacc ttgcttgttt gtatttagga agtaataatt 780
 taacaaaagt accatcaaat gcctttgaag tacttaaaag tcttagaaga ctttctttgt 840

ctcataatcc	tattgaagca	atacagccct	ttgcatttaa	aggacttgcc	aatctggaat	900
acctcctcct	gaaaaattca	agaattagga	atgttactag	ggatgggttt	agtggaatta	960
ataatcttaa	acatttgatc	ttaagtcata	atgatttaga	gaattttaa	tctgacacat	1020
tcagtttggt	aaagaattta	atttacctta	agttagatag	aaacagaata	attagcattg	1080
ataatgatac	atttgaaaat	atgggagcat	ctttgaagat	ccttaatctg	tcattttaata	1140
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tacgttatat	taacattaca	aattgtgtta	catcttcaat	aaatgtatcc	agagcttggg	1380
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taaaggcatc	agaaaactca	agggaaaata	gacttgaata	ctacagcttt	tatcagtcag	1860
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tttttgaaca	ttctgcttta	taactcaact	aaatattgtc	tataagaaac	ttcagtgcca	2040
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ggcgggccgc						2169

<210> 47

<211> 1866

<212> DNA

<213> Homo sapiens

<400> 47

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agtacagttt	ttctgtatct	gactgggaat	aatatatctt	atataaatga	aagtgaatta	240
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tataatcagg	tatcttttgt	tccgagagga	gtatttaatg	atctagtttc	agttcagtac	480
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gctcttcgga	tacttgattt	atcaaacaat	aacattttga	ggatatcaga	atcaggcttt	600
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cgacttcata aacaaattgt tctgaaaat gaggcacagg tcattctttt tgaacattct 1860
gcttta 1866

<210> 48

<211> 622

<212> PRT

<213> Homo sapiens

<400> 48

Met Cys Gly Leu Gln Phe Ser Leu Pro Cys Leu Arg Leu Phe Leu Val
1 5 10 15

Val Thr Cys Tyr Leu Leu Leu Leu His Lys Glu Ile Leu Gly Cys
20 25 30

Ser Ser Val Cys Gln Leu Cys Thr Gly Arg Gln Ile Asn Cys Arg Asn
35 40 45

Leu Gly Leu Ser Ser Ile Pro Lys Asn Phe Pro Glu Ser Thr Val Phe
50 55 60

Leu Tyr Leu Thr Gly Asn Asn Ile Ser Tyr Ile Asn Glu Ser Glu Leu
65 70 75 80

Thr Gly Leu His Ser Leu Val Ala Leu Tyr Leu Asp Asn Ser Asn Ile
85 90 95

Leu Tyr Val Tyr Pro Lys Ala Phe Val Gln Leu Arg His Leu Tyr Phe
100 105 110

Leu Phe Leu Asn Asn Asn Phe Ile Lys Arg Leu Asp Pro Gly Ile Phe
115 120 125

Lys Gly Leu Leu Asn Leu Arg Asn Leu Tyr Leu Gln Tyr Asn Gln Val

130		135		140
Ser Phe Val Pro Arg Gly Val Phe Asn Asp Leu Val Ser Val Gln Tyr				
145		150		155 160
Leu Asn Leu Gln Arg Asn Arg Leu Thr Val Leu Gly Ser Gly Thr Phe				
	165		170	175
Val Gly Met Val Ala Leu Arg Ile Leu Asp Leu Ser Asn Asn Asn Ile				
	180		185	190
Leu Arg Ile Ser Glu Ser Gly Phe Gln His Leu Glu Asn Leu Ala Cys				
	195		200	205
Leu Tyr Leu Gly Ser Asn Asn Leu Thr Lys Val Pro Ser Asn Ala Phe				
	210		215	220
Glu Val Leu Lys Ser Leu Arg Arg Leu Ser Leu Ser His Asn Pro Ile				
	225		230	235 240
Glu Ala Ile Gln Pro Phe Ala Phe Lys Gly Leu Ala Asn Leu Glu Tyr				
		245	250	255
Leu Leu Leu Lys Asn Ser Arg Ile Arg Asn Val Thr Arg Asp Gly Phe				
	260		265	270
Ser Gly Ile Asn Asn Leu Lys His Leu Ile Leu Ser His Asn Asp Leu				
	275		280	285
Glu Asn Leu Asn Ser Asp Thr Phe Ser Leu Leu Lys Asn Leu Ile Tyr				
	290		295	300
Leu Lys Leu Asp Arg Asn Arg Ile Ile Ser Ile Asp Asn Asp Thr Phe				
	305		310	315 320
Glu Asn Met Gly Ala Ser Leu Lys Ile Leu Asn Leu Ser Phe Asn Asn				
		325	330	335
Leu Thr Ala Leu His Pro Arg Val Leu Lys Pro Leu Ser Ser Leu Ile				
	340		345	350
His Leu Gln Ala Asn Ser Asn Pro Trp Glu Cys Asn Cys Lys Leu Leu				
	355		360	365
Gly Leu Arg Asp Trp Leu Ala Ser Ser Ala Ile Thr Leu Asn Ile Tyr				
	370		375	380
Cys Gln Asn Pro Pro Ser Met Arg Gly Arg Ala Leu Arg Tyr Ile Asn				

385		390		395		400
Ile Thr Asn Cys Val Thr Ser Ser Ile Asn Val Ser Arg Ala Trp Ala						
	405			410		415
Val Val Lys Ser Pro His Ile His His Lys Thr Thr Ala Leu Met Met						
	420			425		430
Ala Trp His Lys Val Thr Thr Asn Gly Ser Pro Leu Glu Asn Thr Glu						
	435			440		445
Thr Glu Asn Ile Thr Phe Trp Glu Arg Ile Pro Thr Ser Pro Ala Gly						
	450			455		460
Arg Phe Phe Gln Glu Asn Ala Phe Gly Asn Pro Leu Glu Thr Thr Ala						
	465			470		475
						480
Val Leu Pro Val Gln Ile Gln Leu Thr Thr Ser Val Thr Leu Asn Leu						
				485		490
						495
Glu Lys Asn Ser Ala Leu Pro Asn Asp Ala Ala Ser Met Ser Gly Lys						
				500		505
						510
Thr Ser Leu Ile Cys Thr Gln Glu Val Glu Lys Leu Asn Glu Ala Phe						
				515		520
						525
Asp Ile Leu Leu Ala Phe Phe Ile Leu Ala Cys Val Leu Ile Ile Phe						
				530		535
						540
Leu Ile Tyr Lys Val Val Gln Phe Lys Gln Lys Leu Lys Ala Ser Glu						
				545		550
						555
						560
Asn Ser Arg Glu Asn Arg Leu Glu Tyr Tyr Ser Phe Tyr Gln Ser Ala						
				565		570
						575
Arg Tyr Asn Val Thr Ala Ser Ile Cys Asn Thr Ser Pro Asn Ser Leu						
				580		585
						590
Glu Ser Pro Gly Leu Glu Gln Ile Arg Leu His Lys Gln Ile Val Pro						
				595		600
						605
Glu Asn Glu Ala Gln Val Ile Leu Phe Glu His Ser Ala Leu						
				610		615
						620

<210> 49

<211> 31

<212> PRT

<213> Homo sapiens

<400> 49

Met Cys Gly Leu Gln Phe Ser Leu Pro Cys Leu Arg Leu Phe Leu Val
1 5 10 15

Val Thr Cys Tyr Leu Leu Leu Leu Leu His Lys Glu Ile Leu Gly
20 25 30

<210> 50

<211> 591

<212> PRT

<213> Homo sapiens

<400> 50

Cys Ser Ser Val Cys Gln Leu Cys Thr Gly Arg Gln Ile Asn Cys Arg
1 5 10 15

Asn Leu Gly Leu Ser Ser Ile Pro Lys Asn Phe Pro Glu Ser Thr Val
20 25 30

Phe Leu Tyr Leu Thr Gly Asn Asn Ile Ser Tyr Ile Asn Glu Ser Glu
35 40 45

Leu Thr Gly Leu His Ser Leu Val Ala Leu Tyr Leu Asp Asn Ser Asn
50 55 60

Ile Leu Tyr Val Tyr Pro Lys Ala Phe Val Gln Leu Arg His Leu Tyr
65 70 75 80

Phe Leu Phe Leu Asn Asn Phe Ile Lys Arg Leu Asp Pro Gly Ile
85 90 95

Phe Lys Gly Leu Leu Asn Leu Arg Asn Leu Tyr Leu Gln Tyr Asn Gln
100 105 110

Val Ser Phe Val Pro Arg Gly Val Phe Asn Asp Leu Val Ser Val Gln
115 120 125

Tyr Leu Asn Leu Gln Arg Asn Arg Leu Thr Val Leu Gly Ser Gly Thr
130 135 140

Phe Val Gly Met Val Ala Leu Arg Ile Leu Asp Leu Ser Asn Asn Asn
145 150 155 160

Ile Leu Arg Ile Ser Glu Ser Gly Phe Gln His Leu Glu Asn Leu Ala
165 170 175

Cys Leu Tyr Leu Gly Ser Asn Asn Leu Thr Lys Val Pro Ser Asn Ala
 180 185 190
 Phe Glu Val Leu Lys Ser Leu Arg Arg Leu Ser Leu Ser His Asn Pro
 195 200 205
 Ile Glu Ala Ile Gln Pro Phe Ala Phe Lys Gly Leu Ala Asn Leu Glu
 210 215 220
 Tyr Leu Leu Leu Lys Asn Ser Arg Ile Arg Asn Val Thr Arg Asp Gly
 225 230 235 240
 Phe Ser Gly Ile Asn Asn Leu Lys His Leu Ile Leu Ser His Asn Asp
 245 250 255
 Leu Glu Asn Leu Asn Ser Asp Thr Phe Ser Leu Leu Lys Asn Leu Ile
 260 265 270
 Tyr Leu Lys Leu Asp Arg Asn Arg Ile Ile Ser Ile Asp Asn Asp Thr
 275 280 285
 Phe Glu Asn Met Gly Ala Ser Leu Lys Ile Leu Asn Leu Ser Phe Asn
 290 295 300
 Asn Leu Thr Ala Leu His Pro Arg Val Leu Lys Pro Leu Ser Ser Leu
 305 310 315 320
 Ile His Leu Gln Ala Asn Ser Asn Pro Trp Glu Cys Asn Cys Lys Leu
 325 330 335
 Leu Gly Leu Arg Asp Trp Leu Ala Ser Ser Ala Ile Thr Leu Asn Ile
 340 345 350
 Tyr Cys Gln Asn Pro Pro Ser Met Arg Gly Arg Ala Leu Arg Tyr Ile
 355 360 365
 Asn Ile Thr Asn Cys Val Thr Ser Ser Ile Asn Val Ser Arg Ala Trp
 370 375 380
 Ala Val Val Lys Ser Pro His Ile His His Lys Thr Thr Ala Leu Met
 385 390 395 400
 Met Ala Trp His Lys Val Thr Thr Asn Gly Ser Pro Leu Glu Asn Thr
 405 410 415
 Glu Thr Glu Asn Ile Thr Phe Trp Glu Arg Ile Pro Thr Ser Pro Ala
 420 425 430

Gly Arg Phe Phe Gln Glu Asn Ala Phe Gly Asn Pro Leu Glu Thr Thr
 435 440 445

Ala Val Leu Pro Val Gln Ile Gln Leu Thr Thr Ser Val Thr Leu Asn
 450 455 460

Leu Glu Lys Asn Ser Ala Leu Pro Asn Asp Ala Ala Ser Met Ser Gly
 465 470 475 480

Lys Thr Ser Leu Ile Cys Thr Gln Glu Val Glu Lys Leu Asn Glu Ala
 485 490 495

Phe Asp Ile Leu Leu Ala Phe Phe Ile Leu Ala Cys Val Leu Ile Ile
 500 505 510

Phe Leu Ile Tyr Lys Val Val Gln Phe Lys Gln Lys Leu Lys Ala Ser
 515 520 525

Glu Asn Ser Arg Glu Asn Arg Leu Glu Tyr Tyr Ser Phe Tyr Gln Ser
 530 535 540

Ala Arg Tyr Asn Val Thr Ala Ser Ile Cys Asn Thr Ser Pro Asn Ser
 545 550 555 560

Leu Glu Ser Pro Gly Leu Glu Gln Ile Arg Leu His Lys Gln Ile Val
 565 570 575

Pro Glu Asn Glu Ala Gln Val Ile Leu Phe Glu His Ser Ala Leu
 580 585 590

<210> 51

<211> 498

<212> PRT

<213> Homo sapiens

<400> 51

Cys Ser Ser Val Cys Gln Leu Cys Thr Gly Arg Gln Ile Asn Cys Arg
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Asn Leu Gly Leu Ser Ser Ile Pro Lys Asn Phe Pro Glu Ser Thr Val
 20 25 30

Phe Leu Tyr Leu Thr Gly Asn Asn Ile Ser Tyr Ile Asn Glu Ser Glu
 35 40 45

Leu Thr Gly Leu His Ser Leu Val Ala Leu Tyr Leu Asp Asn Ser Asn

50	55	60
Ile Leu Tyr Val Tyr Pro Lys Ala Phe Val Gln Leu Arg His Leu Tyr		
65	70	75 80
Phe Leu Phe Leu Asn Asn Asn Phe Ile Lys Arg Leu Asp Pro Gly Ile		
	85	90 95
Phe Lys Gly Leu Leu Asn Leu Arg Asn Leu Tyr Leu Gln Tyr Asn Gln		
	100	105 110
Val Ser Phe Val Pro Arg Gly Val Phe Asn Asp Leu Val Ser Val Gln		
	115	120 125
Tyr Leu Asn Leu Gln Arg Asn Arg Leu Thr Val Leu Gly Ser Gly Thr		
	130	135 140
Phe Val Gly Met Val Ala Leu Arg Ile Leu Asp Leu Ser Asn Asn Asn		
	145	150 155 160
Ile Leu Arg Ile Ser Glu Ser Gly Phe Gln His Leu Glu Asn Leu Ala		
	165	170 175
Cys Leu Tyr Leu Gly Ser Asn Asn Leu Thr Lys Val Pro Ser Asn Ala		
	180	185 190
Phe Glu Val Leu Lys Ser Leu Arg Arg Leu Ser Leu Ser His Asn Pro		
	195	200 205
Ile Glu Ala Ile Gln Pro Phe Ala Phe Lys Gly Leu Ala Asn Leu Glu		
	210	215 220
Tyr Leu Leu Leu Lys Asn Ser Arg Ile Arg Asn Val Thr Arg Asp Gly		
	225	230 235 240
Phe Ser Gly Ile Asn Asn Leu Lys His Leu Ile Leu Ser His Asn Asp		
	245	250 255
Leu Glu Asn Leu Asn Ser Asp Thr Phe Ser Leu Leu Lys Asn Leu Ile		
	260	265 270
Tyr Leu Lys Leu Asp Arg Asn Arg Ile Ile Ser Ile Asp Asn Asp Thr		
	275	280 285
Phe Glu Asn Met Gly Ala Ser Leu Lys Ile Leu Asn Leu Ser Phe Asn		
	290	295 300
Asn Leu Thr Ala Leu His Pro Arg Val Leu Lys Pro Leu Ser Ser Leu		

305		310		315		320
Ile His Leu Gln Ala Asn Ser Asn Pro Trp Glu Cys Asn Cys Lys Leu						
	325		330		335	
Leu Gly Leu Arg Asp Trp Leu Ala Ser Ser Ala Ile Thr Leu Asn Ile						
	340		345		350	
Tyr Cys Gln Asn Pro Pro Ser Met Arg Gly Arg Ala Leu Arg Tyr Ile						
	355		360		365	
Asn Ile Thr Asn Cys Val Thr Ser Ser Ile Asn Val Ser Arg Ala Trp						
	370		375		380	
Ala Val Val Lys Ser Pro His Ile His His Lys Thr Thr Ala Leu Met						
	385		390		395	400
Met Ala Trp His Lys Val Thr Thr Asn Gly Ser Pro Leu Glu Asn Thr						
		405		410		415
Glu Thr Glu Asn Ile Thr Phe Trp Glu Arg Ile Pro Thr Ser Pro Ala						
		420		425		430
Gly Arg Phe Phe Gln Glu Asn Ala Phe Gly Asn Pro Leu Glu Thr Thr						
		435		440		445
Ala Val Leu Pro Val Gln Ile Gln Leu Thr Thr Ser Val Thr Leu Asn						
		450		455		460
Leu Glu Lys Asn Ser Ala Leu Pro Asn Asp Ala Ala Ser Met Ser Gly						
		465		470		475
Lys Thr Ser Leu Ile Cys Thr Gln Glu Val Glu Lys Leu Asn Glu Ala						
		485		490		495
Phe Asp						

<210> 52
 <211> 18
 <212> PRT
 <213> Homo sapiens

<400> 52
 Ile Leu Leu Ala Phe Phe Ile Leu Ala Cys Val Leu Ile Ile Phe Leu
 1 5 10 15

Ile Tyr

<210> 53

<211> 75

<212> PRT

<213> Homo sapiens

<400> 53

Lys Val Val Gln Phe Lys Gln Lys Leu Lys Ala Ser Glu Asn Ser Arg
1 5 10 15

Glu Asn Arg Leu Glu Tyr Tyr Ser Phe Tyr Gln Ser Ala Arg Tyr Asn
20 25 30

Val Thr Ala Ser Ile Cys Asn Thr Ser Pro Asn Ser Leu Glu Ser Pro
35 40 45

Gly Leu Glu Gln Ile Arg Leu His Lys Gln Ile Val Pro Glu Asn Glu
50 55 60

Ala Gln Val Ile Leu Phe Glu His Ser Ala Leu
65 70 75

<210> 54

<211> 1432

<212> DNA

<213> Homo sapiens

<400> 54

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ggaaaaacga aaactgctac aatactccag ggagctacgt ctgtgtgtgt cctgacggct 1080
tcgaagaaac ggaagatgcc tgtgtgccgc cggcagaggc tgaagccaca gaaggagaaa 1140
gcccgacaca gctgccctcc cgcgaagacc tgtaatgtgc cggacttacc ctttaaatta 1200
ttcagaagga tgtcccgctg aaaatgtggc cctgaggatg ccgtctcctg cagtggacag 1260
cggcggggag aggetgcctg ctctctaacg gttgattctc atttgtccct taaacagctg 1320
catttcttgg ttgttcttaa acagacttgt atattttgat acagtctctt gtaataaaat 1380
tgaccattgt aggtaatcaa aaaaaaaaaa aaaaaaaggg cggccgctag ac 1432

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<210> 55
 <211> 1059
 <212> DNA
 <213> Homo sapiens

```

<400> 55
atgcgcctgc cgcgcggggc cgcgctgggg ctctgcgcg ttctgctgct gctgccgccc 60
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tttaaccagg ggatggtgga caccgcaaag aagaactttg gcggcgggaa cacggcttgg 180
gaggaaaaga cgctgtccaa gtacgagtcc agcgagattc gcctgctgga gatcctggag 240
gggctgtgcg agagcagcga cttcgaatgc aatcagatgc tagaggcgca ggaggagcac 300
ctggaggcct ggtggctgca gctgaagagc gaatatcctg acttattcga gtggttttgt 360
gtgaagacac tgaaagtgtg ctgctctcca ggaacctacg gtcccgactg tctcgcatgc 420
cagggcggat ccagagggcc ctgcagcggg aatggccact gcagcggaga tgggagcaga 480
cagggcgacg ggtcctgcgc gtgccacatg ggggtaccag gcccgctgtg cactgactgc 540
atggacggct acttcagctc gctccggaac gagaccaca gcatctgcac agcctgtgac 600
gagtcctgca agacgtgctc gggcctgacc aacagagact gcggcgagtg tgaagtgggc 660
tgggtgctgg acgaggggcg ctgtgtggat gtggacgagt gtgcggccga gccgcctccc 720
tgcagcgtcg cgcagttctg taagaacgcc aacggctcct acacgtgcga agagtgtgac 780
tccagctgtg tgggctgcac aggggaaggc ccaggaaact gtaaagagtg tatctctggc 840
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tgtgtgagga aaaacgaaaa ctgctacaat actccaggga gctacgtctg tgtgtgtcct 960
gacggcttcg aagaaacgga agatgcctgt gtgccgccg cagaggctga agccacagaa 1020
ggagaaagcc cgacacagct gccctcccgc gaagacctg 1059

```

<210> 56
 <211> 353
 <212> PRT
 <213> Homo sapiens

```

<400> 56
Met Arg Leu Pro Arg Arg Ala Ala Leu Gly Leu Leu Pro Leu Leu Leu
  1               5               10              15

Leu Leu Pro Pro Ala Pro Glu Ala Ala Lys Lys Pro Thr Pro Cys His
      20              25              30

```


Ala Asp Val Asp Glu Cys Ser Leu Ala Glu Lys Thr Cys Val Arg Lys
290 295 300

Asn Glu Asn Cys Tyr Asn Thr Pro Gly Ser Tyr Val Cys Val Cys Pro
305 310 315 320

Asp Gly Phe Glu Glu Thr Glu Asp Ala Cys Val Pro Pro Ala Glu Ala
325 330 335

Glu Ala Thr Glu Gly Glu Ser Pro Thr Gln Leu Pro Ser Arg Glu Asp
340 345 350

Leu

<210> 57

<211> 24

<212> PRT

<213> Homo sapiens

<400> 57

Met Arg Leu Pro Arg Arg Ala Ala Leu Gly Leu Leu Pro Leu Leu Leu
1 5 10 15

Leu Leu Pro Pro Ala Pro Glu Ala
20

<210> 58

<211> 329

<212> PRT

<213> Homo sapiens

<400> 58

Ala Lys Lys Pro Thr Pro Cys His Arg Cys Arg Gly Leu Val Asp Lys
1 5 10 15

Phe Asn Gln Gly Met Val Asp Thr Ala Lys Lys Asn Phe Gly Gly Gly
20 25 30

Asn Thr Ala Trp Glu Glu Lys Thr Leu Ser Lys Tyr Glu Ser Ser Glu
35 40 45

Ile Arg Leu Leu Glu Ile Leu Glu Gly Leu Cys Glu Ser Ser Asp Phe
50 55 60

Glu Cys Asn Gln Met Leu Glu Ala Gln Glu Glu His Leu Glu Ala Trp

42

<210> 59
 <211> 2730
 <212> DNA
 <213> Homo sapiens

<400> 59

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gtcgacccac gcgctccgtcc tgcggcccca gcctctcctc acgctcgcgc agtctccgcc 60
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cgacaaactt cgcagtgccg cgacccaacc ccagccctgg gtagcctgca gcatggccca 180
gctgttctctg cccctgctgg cagccctggt cctggcccag gctectgcag ctttagcaga 240
tgttctggaa ggagacagct cagaggaccg cgcttttcgc gtgcgcacgc cgggcgacgc 300
gccactgcag ggcgtgctcg gcggcgccct caccatccct tgccacgtcc actacctgcg 360
gccaccgccg agccgcgggg ctgtgctggg ctctccgcgg gtcaagtgga ctttcctgtc 420
ccggggccgg gaggcagagg tgctgggtggc gcggggagtg cgcgtcaagg tgaacgaggc 480
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gctgagcgag ctgcgcccc aacactcagg tatctatcgc tgtgaggtcc agcacggcat 600
cgatgacagc agcgacgctg tggaggtcaa ggtcaaaggg tgcgtctttc tctaccgaga 660
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taccagggag ctggaggccc cctctgaaga taattctgga agaactgccc cagcagggac 2040
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ctctcctgtc ctttgcttc attctcttac ccacctctac ctatgggtct ccaatctcgg 2280
atatccacct tgtgggtatc tcagctctcc gcgtctttac cctgtgatcc cagccccgcc 2340

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actgaccatc	tgtgaccctt	ccctgccatt	gggccctcca	cctgtggctc	acatctcgcc	2400
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ggctcggcct	attttccact	actccettca	tccgcctgtg	tgccgtcccc	tttagctgcc	2520
tcctattgat	ctcaggggaag	cctgggagtc	ccttctcacc	cctcaacctc	cggagtcacg	2580
gagaacccgt	acccccacag	agccttaagc	aactacttct	gtgaagtatt	ttttgactgt	2640
ttcatggaaa	acaagccttg	gaaataaatc	tctattaaac	cgctttgtaa	ccaaaaaaaa	2700
aaaaaaaaaa	aaaaaaaaaa	gggcggccgc				2730

<210> 60

<211> 2013

<212> DNA

<213> Homo sapiens

<400> 60

atggcccagc	tgttcctgcc	cctgctggca	gccctggctc	tggcccaggc	tcctgcagct	60
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ggcgacgcgc	cactgcaggg	cgtgctcggc	ggcgccctca	ccatcccttg	ccacgtccac	180
tacctgcggc	caccgccgag	ccgccgggct	gtgctgggct	ctccgcgggt	caagtggact	240
ttcctgtccc	ggggccggga	ggcagagggt	ctggtggcgc	ggggagtgcg	cgtcaagggt	300
aacgaggcct	accggttccg	cgtggcactg	cctgcgtacc	cagcgtcgct	caccgacgtc	360
tccttgccgc	tgagcgagct	gcgccccaac	gactcaggta	tctatcgctg	tgaggtcacg	420
cacggcatcg	atgacagcag	cgacgctgtg	gaggtaagg	tcaaaggggt	cgtctttctc	480
taccgagagg	gctctgcccc	ctatgctttc	tccttttctg	gggcccagga	ggcctgtgcc	540
cgcattggag	cccacatcgc	caccgccgag	cagctctatg	ccgcctacct	tgggggctat	600
gagcaatgtg	atgctggctg	gctgtcggat	cagaccgtga	ggatcccat	ccagacccca	660
cgagaggcct	gttacggaga	catggatggc	ttccccgggg	tccggaacta	tggtgtggtg	720
gaccgggatg	acctctatga	tgtgtactgt	tatgtgaag	acctaaatgg	agaactgttc	780
ctgggtgacc	ctccagagaa	gctgacattg	gaggaagcac	gggcgtactg	ccaggagcgg	840
ggtgcagaga	ttgccaccac	gggccaaactg	tatgcagcct	gggatgggtg	cctggaccac	900
tgagccccc	ggtggctagc	tgatggcagt	gtgcgctacc	ccatcgtcac	acccagccag	960
cgtgtgggtg	ggggcttgcc	tggtgtcaag	actctcttcc	tcttccccc	ccagactggc	1020
ttccccaata	agcacagccg	cttcaacgtc	tactgcttcc	gagactcggc	ccagccttct	1080
gccatccctg	aggcctccaa	cccagcctcc	aaccagcct	ctgatggact	agaggctatc	1140
gtcacagtga	cagagaccct	ggaggaactg	cagctgcctc	aggaagccac	agagagtga	1200
tcccgtgggg	ccatctactc	catccccatc	atggaggacg	gaggaggtgg	aagctccact	1260
ccagaagacc	cagcagaggc	ccctaggacg	ctcctagaat	ttgaaacaca	atccatggta	1320
ccgcccacgg	ggttctcaga	agaggaaggt	aaggcattgg	aggaagaaga	gaaatatgaa	1380
gatgaagaag	agaaagagga	ggaagaagaa	gaggaggagg	tggaggatga	ggctctgtgg	1440
gcatggcccc	gcgagctcag	cagccccggc	cctgaggcct	ctctccccac	tgagccagca	1500
gcccaggaga	agtcactctc	ccaggcgcca	gcaagggcag	tcctgcagcc	tggtgcatca	1560
ccacttcctg	atggagagtc	agaagcttcc	aggcctccaa	gggtccatgg	accacctact	1620
gagactctgc	ccactcccag	ggagaggaac	ctagcatccc	catcaccttc	cactctggtt	1680
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cctgagggta	ccagggagct	ggaggccccc	tctgaagata	attctggaag	aactgcccc	1860
gcagggacct	cagtgcaggc	ccagccagtg	ctgcccactg	acagcgccag	ccgagggtga	1920
gtggccgtgg	tccccgcctc	aggtaatctc	gcccgaaggct	caactgccct	ctctatccta	1980

ctccttttct tccccctgca gctctgggctc acc

2013

<210> 61

<211> 671

<212> PRT

<213> Homo sapiens

<400> 61

Met Ala Gln Leu Phe Leu Pro Leu Leu Ala Ala Leu Val Leu Ala Gln
1 5 10 15

Ala Pro Ala Ala Leu Ala Asp Val Leu Glu Gly Asp Ser Ser Glu Asp
20 25 30

Arg Ala Phe Arg Val Arg Ile Ala Gly Asp Ala Pro Leu Gln Gly Val
35 40 45

Leu Gly Gly Ala Leu Thr Ile Pro Cys His Val His Tyr Leu Arg Pro
50 55 60

Pro Pro Ser Arg Arg Ala Val Leu Gly Ser Pro Arg Val Lys Trp Thr
65 70 75 80

Phe Leu Ser Arg Gly Arg Glu Ala Glu Val Leu Val Ala Arg Gly Val
85 90 95

Arg Val Lys Val Asn Glu Ala Tyr Arg Phe Arg Val Ala Leu Pro Ala
100 105 110

Tyr Pro Ala Ser Leu Thr Asp Val Ser Leu Ala Leu Ser Glu Leu Arg
115 120 125

Pro Asn Asp Ser Gly Ile Tyr Arg Cys Glu Val Gln His Gly Ile Asp
130 135 140

Asp Ser Ser Asp Ala Val Glu Val Lys Val Lys Gly Val Val Phe Leu
145 150 155 160

Tyr Arg Glu Gly Ser Ala Arg Tyr Ala Phe Ser Phe Ser Gly Ala Gln
165 170 175

Glu Ala Cys Ala Arg Ile Gly Ala His Ile Ala Thr Pro Glu Gln Leu
180 185 190

Tyr Ala Ala Tyr Leu Gly Gly Tyr Glu Gln Cys Asp Ala Gly Trp Leu
195 200 205

Ser Asp Gln Thr Val Arg Tyr Pro Ile Gln Thr Pro Arg Glu Ala Cys
210 215 220

Tyr Gly Asp Met Asp Gly Phe Pro Gly Val Arg Asn Tyr Gly Val Val
225 230 235 240

Asp Pro Asp Asp Leu Tyr Asp Val Tyr Cys Tyr Ala Glu Asp Leu Asn
245 250 255

Gly Glu Leu Phe Leu Gly Asp Pro Pro Glu Lys Leu Thr Leu Glu Glu
260 265 270

Ala Arg Ala Tyr Cys Gln Glu Arg Gly Ala Glu Ile Ala Thr Thr Gly
275 280 285

Gln Leu Tyr Ala Ala Trp Asp Gly Gly Leu Asp His Cys Ser Pro Gly
290 295 300

Trp Leu Ala Asp Gly Ser Val Arg Tyr Pro Ile Val Thr Pro Ser Gln
305 310 315 320

Arg Cys Gly Gly Gly Leu Pro Gly Val Lys Thr Leu Phe Leu Phe Pro
325 330 335

Asn Gln Thr Gly Phe Pro Asn Lys His Ser Arg Phe Asn Val Tyr Cys
340 345 350

Phe Arg Asp Ser Ala Gln Pro Ser Ala Ile Pro Glu Ala Ser Asn Pro
355 360 365

Ala Ser Asn Pro Ala Ser Asp Gly Leu Glu Ala Ile Val Thr Val Thr
370 375 380

Glu Thr Leu Glu Glu Leu Gln Leu Pro Gln Glu Ala Thr Glu Ser Glu
385 390 395 400

Ser Arg Gly Ala Ile Tyr Ser Ile Pro Ile Met Glu Asp Gly Gly Gly
405 410 415

Gly Ser Ser Thr Pro Glu Asp Pro Ala Glu Ala Pro Arg Thr Leu Leu
420 425 430

Glu Phe Glu Thr Gln Ser Met Val Pro Pro Thr Gly Phe Ser Glu Glu
435 440 445

Glu Gly Lys Ala Leu Glu Glu Glu Glu Lys Tyr Glu Asp Glu Glu Glu
450 455 460

Lys Glu Glu Glu Glu Glu Glu Glu Glu Val Glu Asp Glu Ala Leu Trp
465 470 475 480

Ala Trp Pro Ser Glu Leu Ser Ser Pro Gly Pro Glu Ala Ser Leu Pro
485 490 495

Thr Glu Pro Ala Ala Gln Glu Lys Ser Leu Ser Gln Ala Pro Ala Arg
500 505 510

Ala Val Leu Gln Pro Gly Ala Ser Pro Leu Pro Asp Gly Glu Ser Glu
515 520 525

Ala Ser Arg Pro Pro Arg Val His Gly Pro Pro Thr Glu Thr Leu Pro
530 535 540

Thr Pro Arg Glu Arg Asn Leu Ala Ser Pro Ser Pro Ser Thr Leu Val
545 550 555 560

Glu Ala Arg Glu Val Gly Glu Ala Thr Gly Gly Pro Glu Leu Ser Gly
565 570 575

Val Pro Arg Gly Glu Ser Glu Glu Thr Gly Ser Ser Glu Gly Ala Pro
580 585 590

Ser Leu Leu Pro Ala Thr Arg Ala Pro Glu Gly Thr Arg Glu Leu Glu
595 600 605

Ala Pro Ser Glu Asp Asn Ser Gly Arg Thr Ala Pro Ala Gly Thr Ser
610 615 620

Val Gln Ala Gln Pro Val Leu Pro Thr Asp Ser Ala Ser Arg Gly Gly
625 630 635 640

Val Ala Val Val Pro Ala Ser Gly Asn Ser Ala Gln Gly Ser Thr Ala
645 650 655

Leu Ser Ile Leu Leu Leu Phe Phe Pro Leu Gln Leu Trp Val Thr
660 665 670

<210> 62

<211> 22

<212> PRT

<213> Homo sapiens

<400> 62

Met Ala Gln Leu Phe Leu Pro Leu Leu Ala Ala Leu Val Leu Ala Gln
1 5 10 15

Ala Pro Ala Ala Leu Ala
20

<210> 63
<211> 649
<212> PRT
<213> Homo sapiens

<400> 63

Asp Val Leu Glu Gly Asp Ser Ser Glu Asp Arg Ala Phe Arg Val Arg
1 5 10 15

Ile Ala Gly Asp Ala Pro Leu Gln Gly Val Leu Gly Gly Ala Leu Thr
20 25 30

Ile Pro Cys His Val His Tyr Leu Arg Pro Pro Pro Ser Arg Arg Ala
35 40 45

Val Leu Gly Ser Pro Arg Val Lys Trp Thr Phe Leu Ser Arg Gly Arg
50 55 60

Glu Ala Glu Val Leu Val Ala Arg Gly Val Arg Val Lys Val Asn Glu
65 70 75 80

Ala Tyr Arg Phe Arg Val Ala Leu Pro Ala Tyr Pro Ala Ser Leu Thr
85 90 95

Asp Val Ser Leu Ala Leu Ser Glu Leu Arg Pro Asn Asp Ser Gly Ile
100 105 110

Tyr Arg Cys Glu Val Gln His Gly Ile Asp Asp Ser Ser Asp Ala Val
115 120 125

Glu Val Lys Val Lys Gly Val Val Phe Leu Tyr Arg Glu Gly Ser Ala
130 135 140

Arg Tyr Ala Phe Ser Phe Ser Gly Ala Gln Glu Ala Cys Ala Arg Ile
145 150 155 160

Gly Ala His Ile Ala Thr Pro Glu Gln Leu Tyr Ala Ala Tyr Leu Gly
165 170 175

Gly Tyr Glu Gln Cys Asp Ala Gly Trp Leu Ser Asp Gln Thr Val Arg
180 185 190

Tyr Pro Ile Gln Thr Pro Arg Glu Ala Cys Tyr Gly Asp Met Asp Gly

195		200		205
Phe Pro Gly Val Arg Asn Tyr Gly Val Val Asp Pro Asp Asp Leu Tyr				
210		215		220
Asp Val Tyr Cys Tyr Ala Glu Asp Leu Asn Gly Glu Leu Phe Leu Gly				
225		230		235 240
Asp Pro Pro Glu Lys Leu Thr Leu Glu Glu Ala Arg Ala Tyr Cys Gln				
	245		250	255
Glu Arg Gly Ala Glu Ile Ala Thr Thr Gly Gln Leu Tyr Ala Ala Trp				
	260		265	270
Asp Gly Gly Leu Asp His Cys Ser Pro Gly Trp Leu Ala Asp Gly Ser				
	275		280	285
Val Arg Tyr Pro Ile Val Thr Pro Ser Gln Arg Cys Gly Gly Gly Leu				
	290		295	300
Pro Gly Val Lys Thr Leu Phe Leu Phe Pro Asn Gln Thr Gly Phe Pro				
305		310		315 320
Asn Lys His Ser Arg Phe Asn Val Tyr Cys Phe Arg Asp Ser Ala Gln				
	325		330	335
Pro Ser Ala Ile Pro Glu Ala Ser Asn Pro Ala Ser Asn Pro Ala Ser				
	340		345	350
Asp Gly Leu Glu Ala Ile Val Thr Val Thr Glu Thr Leu Glu Glu Leu				
	355		360	365
Gln Leu Pro Gln Glu Ala Thr Glu Ser Glu Ser Arg Gly Ala Ile Tyr				
	370		375	380
Ser Ile Pro Ile Met Glu Asp Gly Gly Gly Gly Ser Ser Thr Pro Glu				
385		390		395 400
Asp Pro Ala Glu Ala Pro Arg Thr Leu Leu Glu Phe Glu Thr Gln Ser				
	405		410	415
Met Val Pro Pro Thr Gly Phe Ser Glu Glu Glu Gly Lys Ala Leu Glu				
	420		425	430
Glu Glu Glu Lys Tyr Glu Asp Glu Glu Glu Lys Glu Glu Glu Glu				
	435		440	445
Glu Glu Glu Val Glu Asp Glu Ala Leu Trp Ala Trp Pro Ser Glu Leu				

450		455		460
Ser Ser Pro Gly Pro Glu Ala Ser Leu Pro Thr Glu Pro Ala Ala Gln				
465		470		480
Glu Lys Ser Leu Ser Gln Ala Pro Ala Arg Ala Val Leu Gln Pro Gly				
	485		490	495
Ala Ser Pro Leu Pro Asp Gly Glu Ser Glu Ala Ser Arg Pro Pro Arg				
	500		505	510
Val His Gly Pro Pro Thr Glu Thr Leu Pro Thr Pro Arg Glu Arg Asn				
	515		520	525
Leu Ala Ser Pro Ser Pro Ser Thr Leu Val Glu Ala Arg Glu Val Gly				
	530		535	540
Glu Ala Thr Gly Gly Pro Glu Leu Ser Gly Val Pro Arg Gly Glu Ser				
	545		550	555
Glu Glu Thr Gly Ser Ser Glu Gly Ala Pro Ser Leu Leu Pro Ala Thr				
	565		570	575
Arg Ala Pro Glu Gly Thr Arg Glu Leu Glu Ala Pro Ser Glu Asp Asn				
	580		585	590
Ser Gly Arg Thr Ala Pro Ala Gly Thr Ser Val Gln Ala Gln Pro Val				
	595		600	605
Leu Pro Thr Asp Ser Ala Ser Arg Gly Gly Val Ala Val Val Pro Ala				
	610		615	620
Ser Gly Asn Ser Ala Gln Gly Ser Thr Ala Leu Ser Ile Leu Leu Leu				
	625		630	635
				640
Phe Phe Pro Leu Gln Leu Trp Val Thr				
	645			

<210> 64
 <211> 456
 <212> PRT
 <213> Sus scrofa

<400> 64
 Met Asn Leu Asp Ile His Cys Glu Gln Leu Ser Asp Ala Arg Trp Thr
 1 5 10 15

Glu Leu Leu Pro Leu Leu Gln Gln Tyr Glu Val Val Arg Leu Asp Asp
 20 25 30

Cys Gly Leu Thr Glu Glu His Cys Lys Asp Ile Gly Ser Ala Leu Arg
 35 40 45

Ala Asn Pro Ser Leu Thr Glu Leu Cys Leu Arg Thr Asn Glu Leu Gly
 50 55 60

Asp Ala Gly Val His Leu Val Leu Gln Gly Leu Gln Ser Pro Thr Cys
 65 70 75 80

Lys Ile Gln Lys Leu Ser Leu Gln Asn Cys Ser Leu Thr Glu Ala Gly
 85 90 95

Cys Gly Val Leu Pro Ser Thr Leu Arg Ser Leu Pro Thr Leu Arg Glu
 100 105 110

Leu His Leu Ser Asp Asn Pro Leu Gly Asp Ala Gly Leu Arg Leu Leu
 115 120 125

Cys Glu Gly Leu Leu Asp Pro Gln Cys His Leu Glu Lys Leu Gln Leu
 130 135 140

Glu Tyr Cys Arg Leu Thr Ala Ala Ser Cys Glu Pro Leu Ala Ser Val
 145 150 155 160

Leu Arg Ala Thr Arg Ala Leu Lys Glu Leu Thr Val Ser Asn Asn Asp
 165 170 175

Ile Gly Glu Ala Gly Ala Arg Val Leu Gly Gln Gly Leu Ala Asp Ser
 180 185 190

Ala Cys Gln Leu Glu Thr Leu Arg Leu Glu Asn Cys Gly Leu Thr Pro
 195 200 205

Ala Asn Cys Lys Asp Leu Cys Gly Ile Val Ala Ser Gln Ala Ser Leu
 210 215 220

Arg Glu Leu Asp Leu Gly Ser Asn Gly Leu Gly Asp Ala Gly Ile Ala
 225 230 235 240

Glu Leu Cys Pro Gly Leu Leu Ser Pro Ala Ser Arg Leu Lys Thr Leu
 245 250 255

Trp Leu Trp Glu Cys Asp Ile Thr Ala Ser Gly Cys Arg Asp Leu Cys
 260 265 270

Arg Val Leu Gln Ala Lys Glu Thr Leu Lys Glu Leu Ser Leu Ala Gly
275 280 285

Asn Lys Leu Gly Asp Glu Gly Ala Arg Leu Leu Cys Glu Ser Leu Leu
290 295 300

Gln Pro Gly Cys Gln Leu Glu Ser Leu Trp Val Lys Ser Cys Ser Leu
305 310 315 320

Thr Ala Ala Cys Cys Gln His Val Ser Leu Met Leu Thr Gln Asn Lys
325 330 335

His Leu Leu Glu Leu Gln Leu Ser Ser Asn Lys Leu Gly Asp Ser Gly
340 345 350

Ile Gln Glu Leu Cys Gln Ala Leu Ser Gln Pro Gly Thr Thr Leu Arg
355 360 365

Val Leu Cys Leu Gly Asp Cys Glu Val Thr Asn Ser Gly Cys Ser Ser
370 375 380

Leu Ala Ser Leu Leu Leu Ala Asn Arg Ser Leu Arg Glu Leu Asp Leu
385 390 395 400

Ser Asn Asn Cys Val Gly Asp Pro Gly Val Leu Gln Leu Leu Gly Ser
405 410 415

Leu Glu Gln Pro Gly Cys Ala Leu Glu Gln Leu Val Leu Tyr Asp Thr
420 425 430

Tyr Trp Thr Glu Glu Val Glu Asp Arg Leu Gln Ala Leu Glu Gly Ser
435 440 445

Lys Pro Gly Leu Arg Val Ile Ser
450 455

<210> 65
<211> 834
<212> PRT
<213> Mus sp.

<400> 65
Met Ala Pro His Trp Ala Val Trp Leu Leu Ala Ala Gly Leu Trp Gly
1 5 10 15

Leu Gly Ile Gly Ala Glu Met Trp Trp Asn Leu Val Pro Arg Lys Thr
20 25 30

Val Ser Ser Gly Glu Leu Val Thr Val Val Arg Arg Phe Ser Gln Thr
 35 40 45

Gly Ile Gln Asp Phe Leu Thr Leu Thr Leu Thr Glu His Ser Gly Leu
 50 55 60

Leu Tyr Val Gly Ala Arg Glu Ala Leu Phe Ala Phe Ser Val Glu Ala
 65 70 75 80

Leu Glu Leu Gln Gly Ala Ile Ser Trp Glu Ala Pro Ala Glu Lys Lys
 85 90 95

Ile Glu Cys Thr Gln Lys Gly Lys Ser Asn Gln Thr Glu Cys Phe Asn
 100 105 110

Phe Ile Arg Phe Leu Gln Pro Tyr Asn Ser Ser His Leu Tyr Val Cys
 115 120 125

Gly Thr Tyr Ala Phe Gln Pro Lys Cys Thr Tyr Ile Asn Met Leu Thr
 130 135 140

Phe Thr Leu Asp Arg Ala Glu Phe Glu Asp Gly Lys Gly Lys Cys Pro
 145 150 155 160

Tyr Asp Pro Ala Lys Gly His Thr Gly Leu Leu Val Asp Gly Glu Leu
 165 170 175

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Arg Tyr Met Gly Thr His His Ser Ile Lys Thr Glu Tyr Leu Ala Phe
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Trp Leu Asn Glu Pro His Phe Val Gly Ser Ala Phe Val Pro Glu Ser
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Val Gly Ser Phe Thr Gly Asp Asp Asp Lys Ile Tyr Phe Phe Phe Ser
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Val Ala Arg Val Cys Lys Gly Asp Met Gly Gly Ala Arg Thr Leu Gln
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Gln Lys Trp Ala Arg Tyr Thr Asp Pro Val Pro Ser Pro Arg Pro Gly
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Ser Cys Ile Asn Asn Trp His Arg Asp Asn Gly Tyr Thr Ser Ser Leu
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Glu Leu Pro Asp Asn Thr Leu Asn Phe Ile Lys Lys His Pro Leu Met
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Glu Asp Gln Val Lys Pro Arg Leu Gly Arg Pro Leu Leu Val Lys Lys
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Asn Thr Asn Phe Thr His Val Val Ala Asp Arg Val Pro Gly Leu Asp
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Gly Ala Thr Tyr Thr Val Leu Phe Ile Gly Thr Gly Asp Gly Trp Leu
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Leu Lys Ala Val Ser Leu Gly Pro Trp Ile His Met Val Glu Glu Leu
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Gln Val Phe Asp Gln Glu Pro Val Glu Ser Leu Val Leu Ser Gln Ser
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Lys Lys Val Leu Phe Ala Gly Ser Arg Ser Gln Leu Val Gln Leu Ser
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Leu Ala Asp Cys Thr Lys Tyr Arg Phe Cys Val Asp Cys Val Leu Ala
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Arg Asp Pro Tyr Cys Ala Trp Asn Val Asn Thr Ser Arg Cys Val Ala
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Ser Ile Pro Lys Asn Ile Thr Val Val Ser Gly Thr Asp Leu Val Leu
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Pro Cys His Leu Ser Ser Asn Leu Ala His Ala His Trp Thr Phe Gly
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Ser Gln Asp Leu Pro Ala Glu Gln Pro Gly Ser Phe Leu Tyr Asp Thr
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Gly Leu Gln Ala Leu Val Val Met Ala Ala Gln Ser Arg His Ser Gly
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Pro Tyr Arg Cys Tyr Ser Glu Glu Gln Gly Thr Arg Leu Ala Ala Glu
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Arg Ala Pro Leu Glu Asn Leu Gly Leu Val Trp Leu Ala Val Val Ala
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Leu Gly Ala Val Cys Leu Val Leu Leu Leu Leu Val Leu Ser Leu Arg
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785 790 795 800

Gly Gly Ser Gly His Pro Leu Pro Glu Leu Ala Asp Glu Leu Arg Arg
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Thr Gln Leu Leu Thr Leu Ile Leu Ser Tyr Asn Arg Leu Arg Cys Ile
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Pro Pro Arg Thr Phe Asp Gly Leu Lys Ser Leu Arg Leu Leu Ser Leu
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His Gly Asn Asp Ile Ser Val Val Pro Glu Gly Ala Phe Asn Asp Leu
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Cys Asn Met Gln Trp Leu Ser Asp Trp Val Lys Ser Glu Tyr Lys Glu
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Pro Gly Ile Ala Arg Cys Ala Gly Pro Gly Glu Met Ala Asp Lys Leu
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<210> 69

<211> 348

<212> PRT

<213> *Cricetulus griseus*

<400> 69

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Pro Pro Pro Ala Arg Val Ala Ser Arg Lys Pro Thr Met Cys Gln Arg
 20 25 30

Cys Arg Ala Leu Val Asp Lys Phe Asn Gln Gly Met Ala Asn Thr Ala
 35 40 45

Arg Lys Asn Phe Gly Gly Gly Asn Thr Ala Trp Glu Glu Lys Ser Leu
 50 55 60

Ser Lys Tyr Glu Phe Ser Glu Ile Arg Leu Leu Glu Ile Met Glu Gly
 65 70 75 80
 Leu Cys Asp Ser Asn Asp Phe Glu Cys Asn Gln Leu Leu Glu Gln His
 85 90 95
 Glu Glu Gln Leu Glu Ala Trp Trp Gln Thr Leu Lys Lys Glu Cys Pro
 100 105 110
 Asn Leu Phe Glu Trp Phe Cys Val His Thr Leu Lys Ala Cys Cys Leu
 115 120 125
 Pro Gly Thr Tyr Gly Pro Asp Cys Gln Glu Cys Gln Gly Gly Ser Gln
 130 135 140
 Arg Pro Cys Ser Gly Asn Gly His Cys Asp Gly Asp Gly Ser Arg Gln
 145 150 155 160
 Gly Asp Gly Ser Cys Gln Cys His Val Gly Tyr Lys Gly Pro Leu Cys
 165 170 175
 Ile Asp Cys Met Asp Gly Tyr Phe Ser Leu Leu Arg Asn Glu Thr His
 180 185 190
 Ser Phe Cys Thr Ala Cys Asp Glu Ser Cys Lys Thr Cys Ser Gly Pro
 195 200 205
 Thr Asn Lys Gly Cys Val Glu Cys Glu Val Gly Trp Thr Arg Val Glu
 210 215 220
 Asp Ala Cys Val Asp Val Asp Glu Cys Ala Ala Glu Thr Pro Pro Cys
 225 230 235 240
 Ser Asn Val Gln Tyr Cys Glu Asn Val Asn Gly Ser Tyr Thr Cys Glu
 245 250 255
 Glu Cys Asp Ser Thr Cys Val Gly Cys Thr Gly Lys Gly Pro Ala Asn
 260 265 270
 Cys Lys Glu Cys Ile Ser Gly Tyr Ser Lys Gln Lys Gly Glu Cys Ala
 275 280 285
 Asp Ile Asp Glu Cys Ser Leu Glu Thr Lys Val Cys Lys Lys Glu Asn
 290 295 300
 Glu Asn Cys Tyr Asn Thr Pro Gly Ser Phe Val Cys Val Cys Pro Glu
 305 310 315 320

Gly Phe Glu Glu Asp Arg Arg Cys Leu Cys Thr Asp Ser Arg Arg Arg
 325 330 335

Ser Gly Arg Gly Lys Ser His Thr Ala Thr Leu Pro
 340 345

<210> 70
 <211> 1399
 <212> DNA
 <213> *Cricetulus griseus*

<400> 70
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 ctgctactgc tgctgctgcc gcctcccgcg cgcggtggcct cccggaagcc gacaatgtgc 180
 cagaggtgcc gggcgctggt ggacaagttc aaccagggga tggccaacac ggccaggaag 240
 aatttcggcg gcggaacac ggcggtggag gagaagagtc tgtccaagta cgaattcagt 300
 gagattcggc tcctggagat tatggagggc ctgtgtgaca gcaacgactt tgaatgcaac 360
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 acctatgggc cagactgtca ggaatgccag ggtgggtctc agaggccttg tagcgggaat 540
 ggccactgcg acggagatgg cagcagacag ggcgacgggt cctgccagtg tcacgtagga 600
 tacaaggggc cgctgtgtat cgactgcatg gatggctact tcagcttgct gaggaacgag 660
 acccacagct tctgcacagc ctgtgatgag tcctgcaaga catgctcagg tccaaccaac 720
 aaaggctgtg tggagtgcga agtgggctgg acacgtgtgg aggatgcctg tgtggatgtt 780
 gacgagtgtg cagcagagac cccaccctgc agcaatgtac agtactgtga aaatgtcaac 840
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 gccaatgtga aagagtgtat ctctggctac agcaagcaga aaggagagtg tgcagatata 960
 gatgaatgct cattagaaac aaagggtgtg aagaaggaaa atgagaactg ctacaatact 1020
 ccaggagct ttgtctgct gtgtccgga ggtttcgagg aagacagaag atgcttgtgt 1080
 acagacagca gaaggcgaag tggcagagga aagtcacaca cagccaccct cccatgagga 1140
 tttgtgacgg gcatccaggt tcagaagctg gactctcacc cttttaagtt attgagagga 1200
 catcctatag aaaatgtggc ccatggacat caacccatt tctccaggaa gttttggagg 1260
 aagaagctgc ctgctttgaa acagtagata ctcaattggc cttttaaaac gctgcatttc 1320
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 ttgaaggtca ccaggaaca 1399

<210> 71
 <211> 528
 <212> PRT
 <213> *Homo sapiens*

<400> 71
 Met Ala Gln Leu Phe Leu Pro Leu Leu Ala Ala Leu Val Leu Ala Gln
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Ala Pro Ala Ala Leu Ala Asp Val Leu Glu Gly Asp Ser Ser Glu Asp
 20 25 30

Arg Ala Phe Arg Val Arg Ile Ala Gly Asp Ala Pro Leu Gln Gly Val
 35 40 45

Leu Gly Gly Ala Leu Thr Ile Pro Cys His Val His Tyr Leu Arg Pro
 50 55 60

Pro Pro Ser Arg Arg Ala Val Leu Gly Ser Pro Arg Val Lys Trp Thr
 65 70 75 80

Phe Leu Ser Arg Gly Arg Glu Ala Glu Val Leu Val Ala Arg Gly Val
 85 90 95

Arg Val Lys Val Asn Glu Ala Tyr Arg Phe Arg Val Ala Leu Pro Ala
 100 105 110

Tyr Pro Ala Ser Leu Thr Asp Val Ser Leu Ala Leu Ser Glu Leu Arg
 115 120 125

Pro Asn Asp Ser Gly Ile Tyr Arg Cys Glu Val Gln His Gly Ile Asp
 130 135 140

Asp Ser Ser Asp Ala Val Glu Ser Ser Gln Arg Tyr Pro Ile Gln Thr
 145 150 155 160

Pro Arg Glu Ala Cys Tyr Gly Asp Met Asp Gly Phe Pro Gly Val Arg
 165 170 175

Asn Tyr Gly Val Val Asp Pro Asp Asp Leu Tyr Asp Val Tyr Cys Tyr
 180 185 190

Ala Glu Asp Leu Asn Gly Glu Leu Phe Leu Gly Asp Pro Pro Glu Lys
 195 200 205

Leu Thr Leu Glu Glu Ala Arg Ala Tyr Cys Gln Glu Arg Gly Ala Glu
 210 215 220

Ile Ala Thr Thr Gly Gln Leu Tyr Ala Ala Trp Asp Gly Gly Leu Asp
 225 230 235 240

His Cys Ser Pro Gly Trp Leu Ala Asp Gly Ser Val Arg Tyr Pro Ile
 245 250 255

Val Thr Pro Ser Gln Arg Cys Gly Gly Gly Leu Pro Gly Val Lys Thr
 260 265 270

Leu Phe Leu Phe Pro Asn Gln Thr Gly Phe Pro Asn Lys His Ser Arg
 275 280 285

Phe Asn Val Tyr Cys Phe Arg Asp Ser Ala Gln Leu Leu Pro Ser Leu
 290 295 300

Arg Pro Pro Thr Gln Pro Pro Thr Gln Leu Asp Gly Leu Glu Ala Ile
 305 310 315 320

Val Thr Val Thr Glu Thr Leu Glu Glu Leu Gln Leu Pro Gln Glu Ala
 325 330 335

Thr Glu Ser Glu Ser Arg Gly Ala Ile Tyr Ser Ile Pro Ile Met Glu
 340 345 350

Asp Gly Gly Gly Gly Ser Ser Thr Pro Glu Asp Pro Ala Glu Ala Pro
 355 360 365

Arg Thr Leu Leu Glu Phe Glu Thr Gln Ser Met Val Pro Pro Thr Gly
 370 375 380

Phe Ser Glu Glu Glu Gly Lys Ala Leu Glu Glu Glu Glu Lys Tyr Glu
 385 390 395 400

Asp Glu Glu Glu Lys Glu Glu Glu Glu Glu Glu Glu Glu Val Glu Asp
 405 410 415

Glu Ala Leu Trp Ala Trp Pro Ser Glu Leu Ser Ser Pro Gly Pro Glu
 420 425 430

Ala Ser Leu Pro Thr Glu Pro Ala Ala Gln Glu Glu Ser Leu Ser Gln
 435 440 445

Ala Pro Ala Arg Ala Val Leu Gln Pro Gly Ala Ser Pro Leu Pro Asp
 450 455 460

Gly Glu Ser Glu Ala Ser Arg Pro Pro Arg Val His Gly Pro Pro Thr
 465 470 475 480

Glu Thr Leu Pro Thr Pro Arg Glu Arg Asn Leu Ala Ser Pro Ser Pro
 485 490 495

Ser Thr Leu Val Glu Ala Arg Glu Val Gly Glu Ala Thr Gly Gly Pro
 500 505 510

Glu Leu Ser Gly Val Pro Arg Gly Gly Ala Arg Thr Gln Phe Ala Leu
 515 520 525

<210> 72
 <211> 883
 <212> PRT
 <213> Mus sp.

<400> 72

Met Ile Pro Leu Leu Leu Ser Leu Leu Ala Ala Leu Val Leu Thr Gln
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Ala Pro Ala Ala Leu Ala Asp Asp Leu Lys Glu Asp Ser Ser Glu Asp
 20 25 30

Arg Ala Phe Arg Val Arg Ile Gly Ala Ala Gln Leu Arg Gly Val Leu
 35 40 45

Gly Gly Ala Leu Ala Ile Pro Cys His Val His His Leu Arg Pro Pro
 50 55 60

Arg Ser Arg Arg Ala Ala Pro Gly Phe Pro Arg Val Lys Trp Thr Phe
 65 70 75 80

Leu Ser Gly Asp Arg Glu Val Glu Val Leu Val Ala Arg Gly Leu Arg
 85 90 95

Val Lys Val Asn Glu Ala Tyr Arg Phe Arg Val Ala Leu Pro Ala Tyr
 100 105 110

Pro Ala Ser Leu Thr Asp Val Ser Leu Val Leu Ser Glu Leu Arg Pro
 115 120 125

Asn Asp Ser Gly Val Tyr Arg Cys Glu Val Gln His Gly Ile Asp Asp
 130 135 140

Ser Ser Asp Ala Val Glu Val Lys Val Lys Gly Val Val Phe Leu Tyr
 145 150 155 160

Arg Glu Gly Ser Ala Arg Tyr Ala Phe Ser Phe Ala Gly Ala Gln Glu
 165 170 175

Ala Cys Ala Arg Ile Gly Ala Arg Ile Ala Thr Pro Glu Gln Leu Tyr
 180 185 190

Ala Ala Tyr Leu Gly Gly Tyr Glu Gln Cys Asp Ala Gly Trp Leu Ser

195		200		205
Asp Gln Thr Val Arg Tyr Pro Ile Gln Asn Pro Arg Glu Ala Cys Ser				
210		215		220
Gly Asp Met Asp Gly Tyr Pro Gly Val Arg Asn Tyr Gly Val Val Gly				
225		230		235
Pro Asp Asp Leu Tyr Asp Val Tyr Cys Tyr Ala Glu Asp Leu Asn Gly				
	245		250	255
Glu Leu Phe Leu Gly Ala Pro Pro Ser Lys Leu Thr Trp Glu Glu Ala				
	260		265	270
Arg Asp Tyr Cys Leu Glu Arg Gly Ala Gln Ile Ala Ser Thr Gly Gln				
	275		280	285
Leu Tyr Ala Ala Trp Asn Gly Gly Leu Asp Arg Cys Ser Pro Gly Trp				
	290		295	300
Leu Ala Asp Gly Ser Val Arg Tyr Pro Ile Ile Thr Pro Ser Gln Arg				
305		310		315
Cys Gly Gly Gly Leu Pro Gly Val Lys Thr Leu Phe Leu Phe Pro Asn				
	325		330	335
Gln Thr Gly Phe Pro Ser Lys Gln Asn Arg Phe Asn Val Tyr Cys Phe				
	340		345	350
Arg Asp Ser Ala His Pro Ser Ala Ser Ser Glu Ala Ser Ser Pro Ala				
	355		360	365
Ser Asp Gly Leu Glu Ala Ile Val Thr Val Thr Glu Lys Leu Glu Glu				
	370		375	380
Leu Gln Leu Pro Gln Glu Ala Met Glu Ser Glu Ser Arg Gly Ala Ile				
385		390		395
Tyr Ser Ile Pro Ile Ser Glu Asp Gly Gly Gly Gly Ser Ser Thr Pro				
	405		410	415
Glu Asp Pro Ala Glu Ala Pro Arg Thr Pro Leu Glu Ser Glu Thr Gln				
	420		425	430
Ser Ile Ala Pro Pro Thr Glu Ser Ser Glu Glu Glu Gly Val Ala Leu				
	435		440	445
Glu Glu Glu Glu Arg Phe Lys Asp Leu Glu Ala Leu Glu Glu Glu Lys				

450		455		460
Glu Gln Glu Asp Leu Trp Val Trp Pro Arg Glu Leu Ser Ser Pro Leu				
465		470		475 480
Pro Thr Gly Ser Glu Thr Glu His Ser Leu Ser Gln Val Ser Pro Pro				
	485		490	495
Ala Gln Ala Val Leu Gln Leu Asp Ala Ser Pro Ser Pro Gly Pro Pro				
	500		505	510
Arg Phe Arg Gly Pro Pro Ala Glu Thr Leu Leu Pro Pro Arg Glu Trp				
	515		520	525
Ser Ala Thr Ser Thr Pro Gly Gly Ala Arg Glu Val Gly Gly Glu Thr				
	530		535	540
Gly Ser Pro Glu Leu Ser Gly Val Pro Arg Glu Ser Glu Glu Ala Gly				
	545		550	555 560
Ser Ser Ser Leu Glu Asp Gly Pro Ser Leu Leu Pro Ala Thr Trp Ala				
	565		570	575
Pro Val Gly Pro Arg Glu Leu Glu Thr Pro Ser Glu Glu Lys Ser Gly				
	580		585	590
Arg Thr Val Leu Ala Gly Thr Ser Val Gln Ala Gln Pro Val Leu Pro				
	595		600	605
Thr Asp Ser Ala Ser His Gly Gly Val Ala Val Ala Pro Ser Ser Gly				
	610		615	620
Asp Cys Ile Pro Ser Pro Cys His Asn Gly Gly Thr Cys Leu Glu Glu				
	625		630	635 640
Lys Glu Gly Phe Arg Cys Leu Cys Leu Pro Gly Tyr Gly Gly Asp Leu				
	645		650	655
Cys Asp Val Gly Leu His Phe Cys Ser Pro Gly Trp Glu Ala Phe Gln				
	660		665	670
Gly Ala Cys Tyr Lys His Phe Ser Thr Arg Arg Ser Trp Glu Glu Ala				
	675		680	685
Glu Ser Gln Cys Arg Ala Leu Gly Ala His Leu Thr Ser Ile Cys Thr				
	690		695	700
Pro Glu Glu Gln Asp Phe Val Asn Asp Arg Tyr Arg Glu Tyr Gln Trp				

705		710		715		720
Ile Gly Leu Asn Asp Arg Thr Ile Glu Gly Asp Phe Leu Trp Ser Asp						
	725		730		735	
Gly Ala Pro Leu Leu Tyr Glu Asn Trp Asn Pro Gly Gln Pro Asp Ser						
	740		745		750	
Tyr Phe Leu Ser Gly Glu Asn Cys Val Val Met Val Trp His Asp Gln						
	755		760		765	
Gly Gln Trp Ser Asp Val Pro Cys Asn Tyr His Leu Ser Tyr Thr Cys						
	770		775		780	
Lys Met Gly Leu Val Ser Cys Gly Pro Pro Pro Gln Leu Pro Leu Ala						
	785		790		795	800
Gln Ile Phe Gly Arg Pro Arg Leu Arg Tyr Ala Val Asp Thr Val Leu						
	805		810		815	
Arg Tyr Arg Cys Arg Asp Gly Leu Ala Gln Arg Asn Leu Pro Leu Ile						
	820		825		830	
Arg Cys Gln Glu Asn Gly Leu Trp Glu Ala Pro Gln Ile Ser Cys Val						
	835		840		845	
Pro Arg Arg Pro Gly Arg Ala Leu Arg Ser Met Asp Ala Pro Glu Gly						
	850		855		860	
Pro Arg Gly Gln Leu Ser Arg His Arg Lys Ala Pro Leu Thr Pro Pro						
	865		870		875	880
Ser Ser Leu						

<210> 73
 <211> 3153
 <212> DNA
 <213> Mus sp.

<400> 73
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ccgggttttc	cccgggtcaa	gtggaccttc	ctgtccgggg	accgggaggt	agaggttctg	420
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ctcaactgcc	ctctcatgtc	agctgcctcc	ttgtccctcg	atntcgtnag	gggacactgt	3060
gctattcgat	cttgattgtc	gaagagtttt	taggatggag	taccagcaaa	accagggtgga	3120
aataaagttg	tctgaaccca	aagaaaaaaa	aaa			3153

<210> 74
<400> 74
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<210> 75
<400> 75
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<210> 76
<400> 76
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<210> 77
<400> 77
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<210> 78
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<210> 79
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<210> 80
<400> 80
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<210> 81
<211> 2002
<212> DNA
<213> Gerbil

<400> 81
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gccagactt accctcgcgg ttccctcatac aagaagccta aagaattctg aacatgcccc 180
agaaggagtc tttgcatcaa aaaaagcagc aagcatcttt atgcaccgtc gcctcctata 240
caatagattt gatttagaac tcttcactcc cggaacctg gagagagagt gctatgagga 300
gttctgtagt tatgaagaag ccagagagat cctcgggggac aacgaagaaa tgatcacatt 360

ctggcggggaa	tattcagtc	aaggaccaac	cacaagatca	gatgtcaaca	aagagaaaat	420
tgatgttatg	ggccttctga	ctggcttaat	tgcggtgga	gtattcttgg	ttgttttttg	480
cttacttgg	tactatctgt	gtatcaccaa	gtgtaatagg	cagccatc	aaggttcttc	540
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agctgtcttg	tctccatcgt	catcctcaga	ggacgcggga	ctaccttcct	atgaacaggc	660
agtagctctg	accagaaaac	acagtgtctc	accaccacct	ccatatcctg	ggccagcaaa	720
aggatttagg	gtatttaaaa	agtcaatgtc	actcccctct	cactaagccc	accttgccgc	780
cttgctgtgg	tctgaataat	atgttcttcc	tgaaacaaca	acaacaaaaa	aatttgccctg	840
ttcagctttt	tatgacaaag	cacaaggaat	aaaggaacac	tatatacaga	acagaattca	900
ccacagcccc	gctttcagct	ctgcccccaa	ctggattgct	gtcttggtta	gagacttcta	960
ccgtgcttcc	tcgaagttaa	gaagaaagt	cctttttgca	atgtaaaactg	tactggttca	1020
aacattcttg	ctacagctag	gtacctataa	tccccacctt	caggagactt	aggcgggagg	1080
gatgagagtt	caaggccagc	ctgggcccctg	tcaggacgct	gtctcaaaac	aaagtttgtt	1140
atcaatagaa	taattagaat	taacaaacta	ggattttcag	tcttaagtca	tgatattgga	1200
tcttctcttc	agtaaggttt	cttttttgct	agaaatactt	catagaattt	gacatttttg	1260
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cagcaaat	gcaggctctc	attttgttcc	ctcgctatcc	atcgatcatg	tttcagtgt	1380
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taggcaggca	gatctctgtg	agctgaagga	cagcctggcc	tacaaagtcc	aggacaaccg	1500
agaccacaca	gagaaacctt	gtcttgaaaa	acaaaacaaa	aacaagagag	agagagagag	1560
agagagaaaa	gagatgtcaa	gaggtttttg	tttttttttt	tttaaattac	tatttatggg	1620
cctcacttgg	aaaagtgtt	gccatgcaaa	tagaaggaca	ggagttcaat	cctcattacc	1680
cacatttgaa	acaaataaca	agaaaaacaa	acaaaaaac	caaaacaaac	aaaatcttga	1740
gaacttgagt	gaataccggt	aacctcaggg	ctaggcactg	taactgaatc	aggagcctcc	1800
agatccaggg	aaacgtgtc	tcaacaaata	aataaataag	taagtcagt	agggtgtctt	1860
taaaccagc	acttgagagc	caaaggcagg	cagagctcag	tgagttggag	accagcctgg	1920
tctacaaagc	aagttctaag	ggagccaggg	cacagagaaa	ccctgtctga	aggaaaaaaa	1980
aaaaaaaaaa	aagggcggcc	gc				2002

<210> 82

<211> 675

<212> DNA

<213> Gerbil

<400> 82

atgtttctgc	ttctgggtgg	actcagccag	ctgcccagac	ttaccctcgc	ggttcctcat	60
acaagaagcc	taaagaattc	tgaacatgcc	ccagaaggag	tctttgcatc	aaaaaaagca	120
gcaagcatct	ttatgcaccg	tcgcctccta	tacaatagat	ttgatttaga	actcttcact	180
cccggaacc	tggagagaga	gtgctatgag	gagttctgta	gttatgaaga	agccagagag	240
atcctcgggg	acaacgaaga	aatgatcaca	ttctggcggg	aatattcagt	caaaggacca	300
accacaagat	cagatgtcaa	caaagagaaa	attgatgtta	tgggccttct	gactggctta	360
attgcggtctg	gagtattctt	ggttgttttt	ggcttacttg	gttactatct	gtgtatcacc	420
aagtgttaata	ggcagccata	tcaaggttct	tcagctgtct	acacaagaag	gaccaggcac	480
acaccgtcca	tcattttcag	aacctatgag	gaagctgtct	tgtctccatc	gtcatcctca	540
gaggacgcgg	gactaccttc	ctatgaacag	gcagtagctc	tgaccagaaa	acacagtgtc	600
tcaccaccac	ctccatatcc	tgggccagca	aaaggattta	gggtatttaa	aaagtcaatg	660
tcactcccat	ctcac					675

<210> 83
<211> 225
<212> PRT
<213> Gerbil

<400> 83

Met Phe Leu Leu Leu Val Val Leu Ser Gln Leu Pro Arg Leu Thr Leu
1 5 10 15

Ala Val Pro His Thr Arg Ser Leu Lys Asn Ser Glu His Ala Pro Glu
20 25 30

Gly Val Phe Ala Ser Lys Lys Ala Ala Ser Ile Phe Met His Arg Arg
35 40 45

Leu Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu
50 55 60

Glu Arg Glu Cys Tyr Glu Glu Phe Cys Ser Tyr Glu Glu Ala Arg Glu
65 70 75 80

Ile Leu Gly Asp Asn Glu Glu Met Ile Thr Phe Trp Arg Glu Tyr Ser
85 90 95

Val Lys Gly Pro Thr Thr Arg Ser Asp Val Asn Lys Glu Lys Ile Asp
100 105 110

Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val
115 120 125

Val Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn Arg
130 135 140

Gln Pro Tyr Gln Gly Ser Ser Ala Val Tyr Thr Arg Arg Thr Arg His
145 150 155 160

Thr Pro Ser Ile Ile Phe Arg Thr His Glu Glu Ala Val Leu Ser Pro
165 170 175

Ser Ser Ser Ser Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala Val
180 185 190

Ala Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Pro Tyr Pro Gly
195 200 205

Pro Ala Lys Gly Phe Arg Val Phe Lys Lys Ser Met Ser Leu Pro Ser

210

215

220

His
225

<210> 84
<211> 17
<212> PRT
<213> Gerbil

<400> 84

Met Phe Leu Leu Leu Val Val Leu Ser Gln Leu Pro Arg Leu Thr Leu
1 5 10 15

Ala

<210> 85
<211> 208
<212> PRT
<213> Gerbil

<400> 85

Val Pro His Thr Arg Ser Leu Lys Asn Ser Glu His Ala Pro Glu Gly
1 5 10 15

Val Phe Ala Ser Lys Lys Ala Ala Ser Ile Phe Met His Arg Arg Leu
20 25 30

Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu Glu
35 40 45

Arg Glu Cys Tyr Glu Glu Phe Cys Ser Tyr Glu Glu Ala Arg Glu Ile
50 55 60

Leu Gly Asp Asn Glu Glu Met Ile Thr Phe Trp Arg Glu Tyr Ser Val
65 70 75 80

Lys Gly Pro Thr Thr Arg Ser Asp Val Asn Lys Glu Lys Ile Asp Val
85 90 95

Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val Val
100 105 110

Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn Arg Gln
115 120 125

Pro Tyr Gln Gly Ser Ser Ala Val Tyr Thr Arg Arg Thr Arg His Thr
 130 135 140

Pro Ser Ile Ile Phe Arg Thr His Glu Glu Ala Val Leu Ser Pro Ser
 145 150 155 160

Ser Ser Ser Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala Val Ala
 165 170 175

Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Pro Tyr Pro Gly Pro
 180 185 190

Ala Lys Gly Phe Arg Val Phe Lys Lys Ser Met Ser Leu Pro Ser His
 195 200 205

<210> 86
 <211> 95
 <212> PRT
 <213> Gerbil

<400> 86

Val Pro His Thr Arg Ser Leu Lys Asn Ser Glu His Ala Pro Glu Gly
 1 5 10 15

Val Phe Ala Ser Lys Lys Ala Ala Ser Ile Phe Met His Arg Arg Leu
 20 25 30

Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu Glu
 35 40 45

Arg Glu Cys Tyr Glu Glu Phe Cys Ser Tyr Glu Glu Ala Arg Glu Ile
 50 55 60

Leu Gly Asp Asn Glu Glu Met Ile Thr Phe Trp Arg Glu Tyr Ser Val
 65 70 75 80

Lys Gly Pro Thr Thr Arg Ser Asp Val Asn Lys Glu Lys Ile Asp
 85 90 95

<210> 87
 <211> 25
 <212> PRT

<213> Gerbil

<400> 87

Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val
1 5 10 15

Val Phe Gly Leu Leu Gly Tyr Tyr Leu
20 25

<210> 88

<211> 88

<212> PRT

<213> Gerbil

<400> 88

Cys Ile Thr Lys Cys Asn Arg Gln Pro Tyr Gln Gly Ser Ser Ala Val
1 5 10 15

Tyr Thr Arg Arg Thr Arg His Thr Pro Ser Ile Ile Phe Arg Thr His
20 25 30

Glu Glu Ala Val Leu Ser Pro Ser Ser Ser Ser Glu Asp Ala Gly Leu
35 40 45

Pro Ser Tyr Glu Gln Ala Val Ala Leu Thr Arg Lys His Ser Val Ser
50 55 60

Pro Pro Pro Pro Tyr Pro Gly Pro Ala Lys Gly Phe Arg Val Phe Lys
65 70 75 80

Lys Ser Met Ser Leu Pro Ser His
85

<210> 89

<400> 89

000

<210> 90

<400> 90

000

<210> 91

<400> 91

000

<210> 92
 <211> 962
 <212> DNA
 <213> Mus sp.

<400> 92
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 tcctccaact ggctgaaaca tatctccatc cctgagttgg ctgcactgcc aacttatctc 120
 aagaacaggc tctacctgca caacaacccg ctgccctgtg actgcagcct ctaccacctg 180
 ctccggcgct ggcaccagcg gggcctgagt gccctgcatg attttgaacg cgagtacaca 240
 tgcttgggtct ttaaggtgtc agagtcccgag gtgcgctttt ttgagcacag ccgggtcttc 300
 aagaactgct ctgtggctgc agctccaggc ttagagctgc ctgaagagca gctgcacgcg 360
 cagggtgggc agtccctgag gctcttctgc aacaccagtg tgcctgccac tcgggtggcc 420
 tgggtctccc cgaagaatga gctgcttgtg gcgccagcct ctcaggatgg tagcatcgct 480
 gtgttggctg atggcagctt agccataggc aggggtgcaag agcagcacgc aggcgtcttt 540
 gtgtgcctgg ccagtgggccc ccgcctgcac cacaaccaga cacttgagta caatgtgagt 600
 gtgcaaaagg ctgccccga gccagagact ttcaacacag gctttaccac cctgctgggc 660
 tgtattgtgg gcctggtgct ggtgtgtgct tacttgtttg caccaccctg tcgtggctgc 720
 tgtcactgct gtcagcgggc ctgccgcaac cgttgcctggc cccgggcatc cagtccactc 780
 caggagctga gcgcacagtc ctccatgctt agcactacgc caccagatgc accagccgc 840
 aaggccagtg tccacaagca tgtgtgtctc ctggagccgg gcaagaaggc cctcaatggc 900
 cgtgtgcagc tcgcagtacc tccagactcc gatctgtgca accccatggg cttgcaactc 960
 aa 962

<210> 93
 <211> 320
 <212> PRT
 <213> Mus sp.

<400> 93
 Pro Phe Leu Phe Asn His Leu His Gly Leu Gly Leu Thr Arg Leu Arg
 1 5 10 15
 Thr Leu Asp Leu Ser Ser Asn Trp Leu Lys His Ile Ser Ile Pro Glu
 20 25 30
 Leu Ala Ala Leu Pro Thr Tyr Leu Lys Asn Arg Leu Tyr Leu His Asn
 35 40 45
 Asn Pro Leu Pro Cys Asp Cys Ser Leu Tyr His Leu Leu Arg Arg Trp
 50 55 60
 His Gln Arg Gly Leu Ser Ala Leu His Asp Phe Glu Arg Glu Tyr Thr
 65 70 75 80

Cys	Leu	Val	Phe	Lys	Val	Ser	Glu	Ser	Arg	Val	Arg	Phe	Phe	Glu	His	85	90	95	
Ser	Arg	Val	Phe	Lys	Asn	Cys	Ser	Val	Ala	Ala	Ala	Pro	Gly	Leu	Glu	100	105	110	
Leu	Pro	Glu	Glu	Gln	Leu	His	Ala	Gln	Val	Gly	Gln	Ser	Leu	Arg	Leu	115	120	125	
Phe	Cys	Asn	Thr	Ser	Val	Pro	Ala	Thr	Arg	Val	Ala	Trp	Val	Ser	Pro	130	135	140	
Lys	Asn	Glu	Leu	Leu	Val	Ala	Pro	Ala	Ser	Gln	Asp	Gly	Ser	Ile	Ala	145	150	155	160
Val	Leu	Ala	Asp	Gly	Ser	Leu	Ala	Ile	Gly	Arg	Val	Gln	Glu	Gln	His	165	170	175	
Ala	Gly	Val	Phe	Val	Cys	Leu	Ala	Ser	Gly	Pro	Arg	Leu	His	His	Asn	180	185	190	
Gln	Thr	Leu	Glu	Tyr	Asn	Val	Ser	Val	Gln	Lys	Ala	Arg	Pro	Glu	Pro	195	200	205	
Glu	Thr	Phe	Asn	Thr	Gly	Phe	Thr	Thr	Leu	Leu	Gly	Cys	Ile	Val	Gly	210	215	220	
Leu	Val	Leu	Val	Leu	Leu	Tyr	Leu	Phe	Ala	Pro	Pro	Cys	Arg	Gly	Cys	225	230	235	240
Cys	His	Cys	Cys	Gln	Arg	Ala	Cys	Arg	Asn	Arg	Cys	Trp	Pro	Arg	Ala	245	250	255	
Ser	Ser	Pro	Leu	Gln	Glu	Leu	Ser	Ala	Gln	Ser	Ser	Met	Leu	Ser	Thr	260	265	270	
Thr	Pro	Pro	Asp	Ala	Pro	Ser	Arg	Lys	Ala	Ser	Val	His	Lys	His	Val	275	280	285	
Val	Phe	Leu	Glu	Pro	Gly	Lys	Lys	Gly	Leu	Asn	Gly	Arg	Val	Gln	Leu	290	295	300	
Ala	Val	Pro	Pro	Asp	Ser	Asp	Leu	Cys	Asn	Pro	Met	Gly	Leu	Gln	Leu	305	310	315	320

<210> 94
<211> 16
<212> PRT
<213> Mus sp.

<400> 94
Pro Phe Leu Phe Asn His Leu His Gly Leu Gly Leu Thr Arg Leu Arg
1 5 10 15

<210> 95
<211> 304
<212> PRT
<213> Mus sp.

<400> 95
Thr Leu Asp Leu Ser Ser Asn Trp Leu Lys His Ile Ser Ile Pro Glu
1 5 10 15

Leu Ala Ala Leu Pro Thr Tyr Leu Lys Asn Arg Leu Tyr Leu His Asn
20 25 30

Asn Pro Leu Pro Cys Asp Cys Ser Leu Tyr His Leu Leu Arg Arg Trp
35 40 45

His Gln Arg Gly Leu Ser Ala Leu His Asp Phe Glu Arg Glu Tyr Thr
50 55 60

Cys Leu Val Phe Lys Val Ser Glu Ser Arg Val Arg Phe Phe Glu His
65 70 75 80

Ser Arg Val Phe Lys Asn Cys Ser Val Ala Ala Ala Pro Gly Leu Glu
85 90 95

Leu Pro Glu Glu Gln Leu His Ala Gln Val Gly Gln Ser Leu Arg Leu
100 105 110

Phe Cys Asn Thr Ser Val Pro Ala Thr Arg Val Ala Trp Val Ser Pro
115 120 125

Lys Asn Glu Leu Leu Val Ala Pro Ala Ser Gln Asp Gly Ser Ile Ala
130 135 140

Val Leu Ala Asp Gly Ser Leu Ala Ile Gly Arg Val Gln Glu Gln His
145 150 155 160

Ala Gly Val Phe Val Cys Leu Ala Ser Gly Pro Arg Leu His His Asn

165

170

175

Gln Thr Leu Glu Tyr Asn Val Ser Val Gln Lys Ala Arg Pro Glu Pro
180 185 190

Glu Thr Phe Asn Thr Gly Phe Thr Thr Leu Leu Gly Cys Ile Val Gly
195 200 205

Leu Val Leu Val Leu Leu Tyr Leu Phe Ala Pro Pro Cys Arg Gly Cys
210 215 220

Cys His Cys Cys Gln Arg Ala Cys Arg Asn Arg Cys Trp Pro Arg Ala
225 230 235 240

Ser Ser Pro Leu Gln Glu Leu Ser Ala Gln Ser Ser Met Leu Ser Thr
245 250 255

Thr Pro Pro Asp Ala Pro Ser Arg Lys Ala Ser Val His Lys His Val
260 265 270

Val Phe Leu Glu Pro Gly Lys Lys Gly Leu Asn Gly Arg Val Gln Leu
275 280 285

Ala Val Pro Pro Asp Ser Asp Leu Cys Asn Pro Met Gly Leu Gln Leu
290 295 300

<210> 96

<211> 197

<212> PRT

<213> Mus sp.

<400> 96

Thr Leu Asp Leu Ser Ser Asn Trp Leu Lys His Ile Ser Ile Pro Glu
1 5 10 15

Leu Ala Ala Leu Pro Thr Tyr Leu Lys Asn Arg Leu Tyr Leu His Asn
20 25 30

Asn Pro Leu Pro Cys Asp Cys Ser Leu Tyr His Leu Leu Arg Arg Trp
35 40 45

His Gln Arg Gly Leu Ser Ala Leu His Asp Phe Glu Arg Glu Tyr Thr
50 55 60

Cys Leu Val Phe Lys Val Ser Glu Ser Arg Val Arg Phe Phe Glu His
65 70 75 80

Ser Arg Val Phe Lys Asn Cys Ser Val Ala Ala Ala Pro Gly Leu Glu
85 90 95

Leu Pro Glu Glu Gln Leu His Ala Gln Val Gly Gln Ser Leu Arg Leu
100 105 110

Phe Cys Asn Thr Ser Val Pro Ala Thr Arg Val Ala Trp Val Ser Pro
115 120 125

Lys Asn Glu Leu Leu Val Ala Pro Ala Ser Gln Asp Gly Ser Ile Ala
130 135 140

Val Leu Ala Asp Gly Ser Leu Ala Ile Gly Arg Val Gln Glu Gln His
145 150 155 160

Ala Gly Val Phe Val Cys Leu Ala Ser Gly Pro Arg Leu His His Asn
165 170 175

Gln Thr Leu Glu Tyr Asn Val Ser Val Gln Lys Ala Arg Pro Glu Pro
180 185 190

Glu Thr Phe Asn Thr
195

<210> 97

<211> 20

<212> PRT

<213> Mus sp.

<400> 97

Gly Phe Thr Thr Leu Leu Gly Cys Ile Val Gly Leu Val Leu Val Leu
1 5 10 15

Leu Tyr Leu Phe
20

<210> 98

<211> 87

<212> PRT

<213> Mus sp.

<400> 98

Ala Pro Pro Cys Arg Gly Cys Cys His Cys Cys Gln Arg Ala Cys Arg

1 5 10 15
 Asn Arg Cys Trp Pro Arg Ala Ser Ser Pro Leu Gln Glu Leu Ser Ala
 20 25 30
 Gln Ser Ser Met Leu Ser Thr Thr Pro Pro Asp Ala Pro Ser Arg Lys
 35 40 45
 Ala Ser Val His Lys His Val Val Phe Leu Glu Pro Gly Lys Lys Gly
 50 55 60
 Leu Asn Gly Arg Val Gln Leu Ala Val Pro Pro Asp Ser Asp Leu Cys
 65 70 75 80
 Asn Pro Met Gly Leu Gln Leu
 85

<210> 99
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: TANGO 331
 human radiation panel forward primer

<400> 99
 attattcaga aggatgtccc gtgg 24

<210> 100
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: TANGO 331
 human radiation panel reverse primer

<400> 100
 cctcctgatt acctacaatg gtc 23